



# Mobility/Survivability Teach Slides

*Updated 22 May 2001*



# PLANNING



# Terrain Analysis



**“Remember that the terrain analysis is not the end product of the IPB process. Rather, it is the means to determine which friendly COAs can best exploit the opportunities the terrain provides and how the terrain affects the threat’s available COAs.”**

**FM 34-130 (p.  
2-10)**



# How Do We Visualize Terrain? “A Way”



## **OACO=K**

- Obstacles
- Avenues of Approach
- Cover & Concealment
- Observation of Fields of Fire
- **Key Terrain**

## **Terrain Effects**

- Task Force Maneuverability
- Ability to Mass Fires
- Use of Mobility Assets
- Command And Control
- Communications
- Enemy Assets



# OACOK



## Obstacles

**Offense** Task-organizing special engineer mobility assets (such as AVLBs and ACEs). Plotting enemy countermobility effort, tying into existing obstacles.

**Defense** Tying in a reinforcing obstacle to existing obstacles might require an increased countermobility effort.

## Avenues of approach

**Offense** Capability to conduct in-stride, deliberate, and covert breaching operations. Focusing countermobility effort in a transition to a hasty defense. The need for flank protection.

**Defense** Focusing specific obstacle effects in a specific location in an AA. Size of AA impacts on required countermobility effort.

## Cover and concealment

**Offense** Planning obscuration/assault positions for breaching operations. Impacts feasibility of conducting a covert breach.

**Defense** Required effort for survivability and deception operations.

## Observation and fields of fire

**Offense** Planning the obscuration/location of the support force for breaching operations.

**Defense** Obstacle distance from direct-fire systems (might also affect obstacle composition with reduced standoff). Limited fields of fire might limit certain obstacle effects (for example, fix and block).

## Key terrain

**Offense** Targeting indirect-fire suppression and obscuration for breaching operations.

**Defense** Obstacle intents tied to how valuable the key terrain is for retention.



# Terrain Analysis



**Terrabase supports the task force's planning process with tailored topographic products. Terrabase provides terrain information to analyze the following:**

- **ABF and SBF positions.**
- **Cross country mobility.**
- **COLT/ETAC positions.**
- **Situational obstacle locations.**
- **IV-line locations.**
- **Lines of communication.**
- **ADA radar locations**
- **Helicopter LZ locations**

**The following products can be used for analyzing terrain:**

- **Visible area plots**
- **Oblique view.**
- **Perspective view**
- **LOS profile: weapons range, colt locations, retrans, jammer sites, radar sites, obstacle integration**



# TERRAIN ANALYSIS



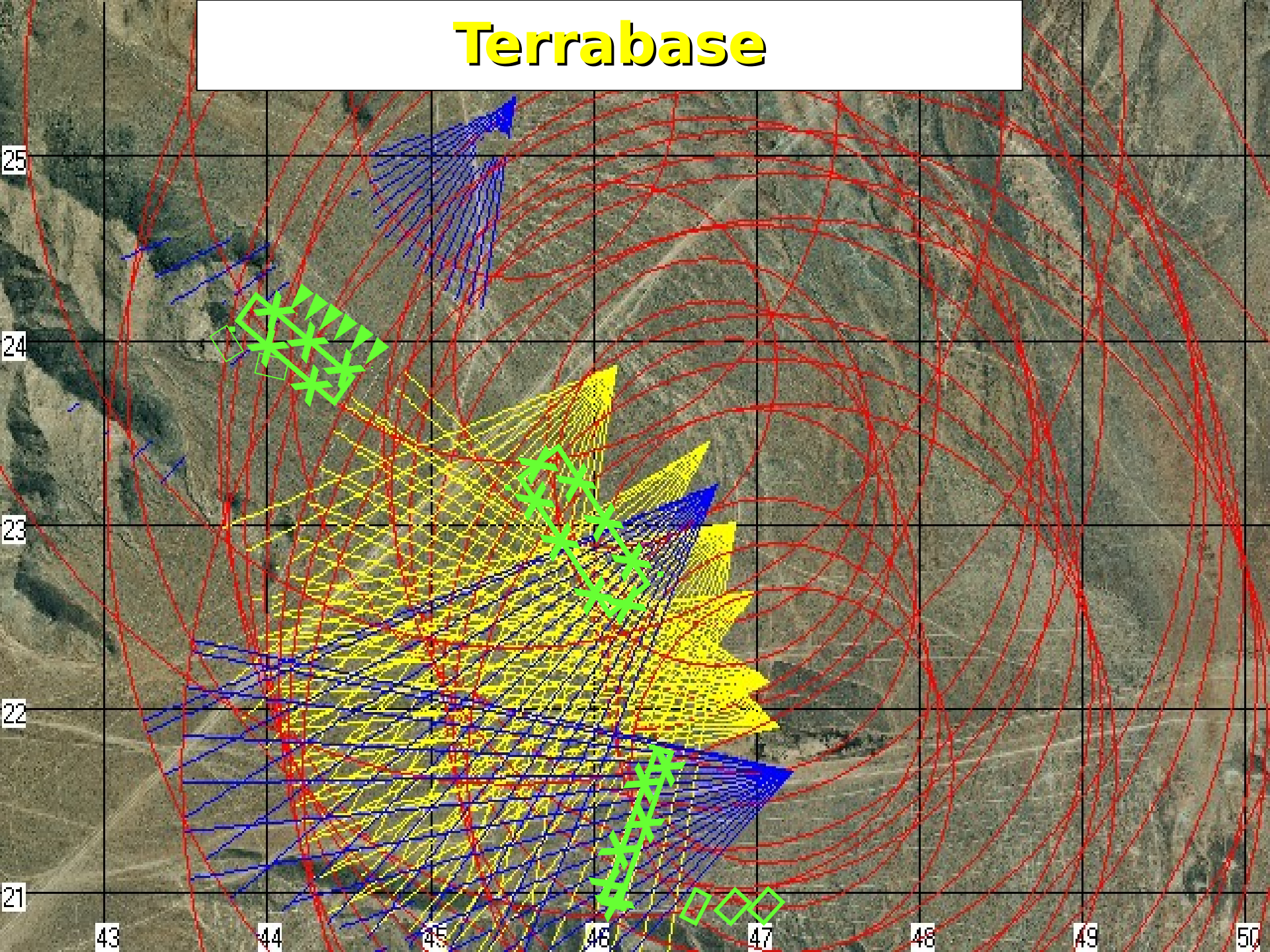
**TERRAIN PRODUCTS SUPPORT DEVELOPMENT OF THE SITE MP WITH TAILORED TOPOGRAPHIC PRODUCTS. THESE PRODUCTS PROVIDE TERRAIN INFORMATION TO ANALYZE THE FOLLOWING:**

**-SOILS ANALYSIS    LIKELY ENEMY POSITIONS  
ATD / BERM LOCATIONS**

**-VISIBLE AREA PLOTS    OBSTACLES => FIGHTING POSITIONS  
FIGHTING POSITIONS=>OBSTACLES  
RADAR LOCATIONS  
COLT LOCATIONS  
RETRANS SITES  
JAMMER LOCATIONS**

**-LINE OF SITE PLOTS    OBSTACLE INTEGRATION  
RADAR, COLT, RETRANS, ETC**

# Terrabase







# ENGINEER BATTLEFIELD ASSESSMENT



## **Terrain Analysis:**

- Analyze the terrain's impact on the battle using the OACOK framework
- Analyze the advantages/disadvantages for enemy and friendly forces
- Analyze the impacts on accomplishing the mission

## **Enemy Mission and M/S Capabilities:**

- Estimate the enemy engineer capability
- Plot the enemy engineer effort (SITE MP)

## **Friendly Mission and M/S Capabilities:**

- Estimate the engineer assets available based on task organization of maneuver and engineer forces (including adjacent forces)
- Identify the availability of critical resources
- Estimate the total engineer capability based on planning



# ATTACK



# Engineer Checklist For A Deliberate Attack



## PLANNING:

### Mission Analysis:

- EBA (MCOO, Friendly engineer capabilities, enemy engineer capabilities)
- Template expected enemy engineer assets
- Analyze enemy mission and combat capabilities, to include weapons and their effective ranges
- Analyze threat engineer organizations and their manpower and equipment capabilities
- Estimate enemy capabilities to employ scatterable mines, and emplace conventional minefields
- Identify AAs from the flanks during the attack and the need for flank protection
- Identify AAs upon consolidation which support the transition to the defense
- Recommend IR and PIR and integrate into R&S plan
- Review all templates (doctrinal, situational, event, and DST)
- Recommend HVTs (scatterable mine delivery systems)
- Identify mechanical breaching capabilities (to include mine plows)
- Check maintenance status

### COA Development:

- Use MCOO to position forces and analyze fire control
- Determine the type of breaching operation required
- Reverse plan from actions on the objective (M-CRABS)
- Identify engineer critical tasks to support the scheme of maneuver
- Develop CL IV & V supply requirements

### War-gaming:

- War-game FASCAM employment- achieve effect (eyes, trigger, executioner)
- Focus on synchronization (timing of the breach, CFZs, SOSR)
- Record situational obstacle employment on the DST and Synchronization matrix



# Engineer Checklist For A Deliberate Attack (Continued)



## **WAR-GAMING:**

- Develop the Synchronization matrix and timeline
- Ensure ADA coverage of breach points and critical movement routes
- Coordinate with the CSS rep to identify CL IV & V limitations and request additional support
- Anticipate losses and pass information to the S-1
- Identify C2 requirements for the movement of follow-on forces and equipment
- Plan transition to the defense

## **PREPARATION**

- Prepare the commanders' battle tracking and concept cards
- Monitor the request for CL IV & V materials and haul support
- Check the positioning and timing of artillery support and the fire support overlay for FASCAM and targets
- Monitor status of breach assets and marking materials
- Attend the rehearsal
- Submit scatterable minefield reports, records, and warnings
- Check TOC operations (message logging, battle tracking, information dissemination, etc.)
- Continue point of breach and zone of penetration refinement

## **EXECUTION**

- Track enemy and friendly locations and critical events
- Track the DST/matrix and keep the commander informed
- Track the employment of enemy and friendly FASCAM
- Send scatterable mine warnings to subordinate units
- Track battlefield losses
- Track the positioning of Class IV & V supplies
- Monitor SOSR at the zone of penetration



# Breach Planning



**“Planning the breach  
without regard to actions  
on the objective leads to  
disaster.”**

FM 3-34.2 para. 1-47



# Terrain Products



**Terrain products that support the planning of a breach operations should be included in the unit's SOP and **may** include --**

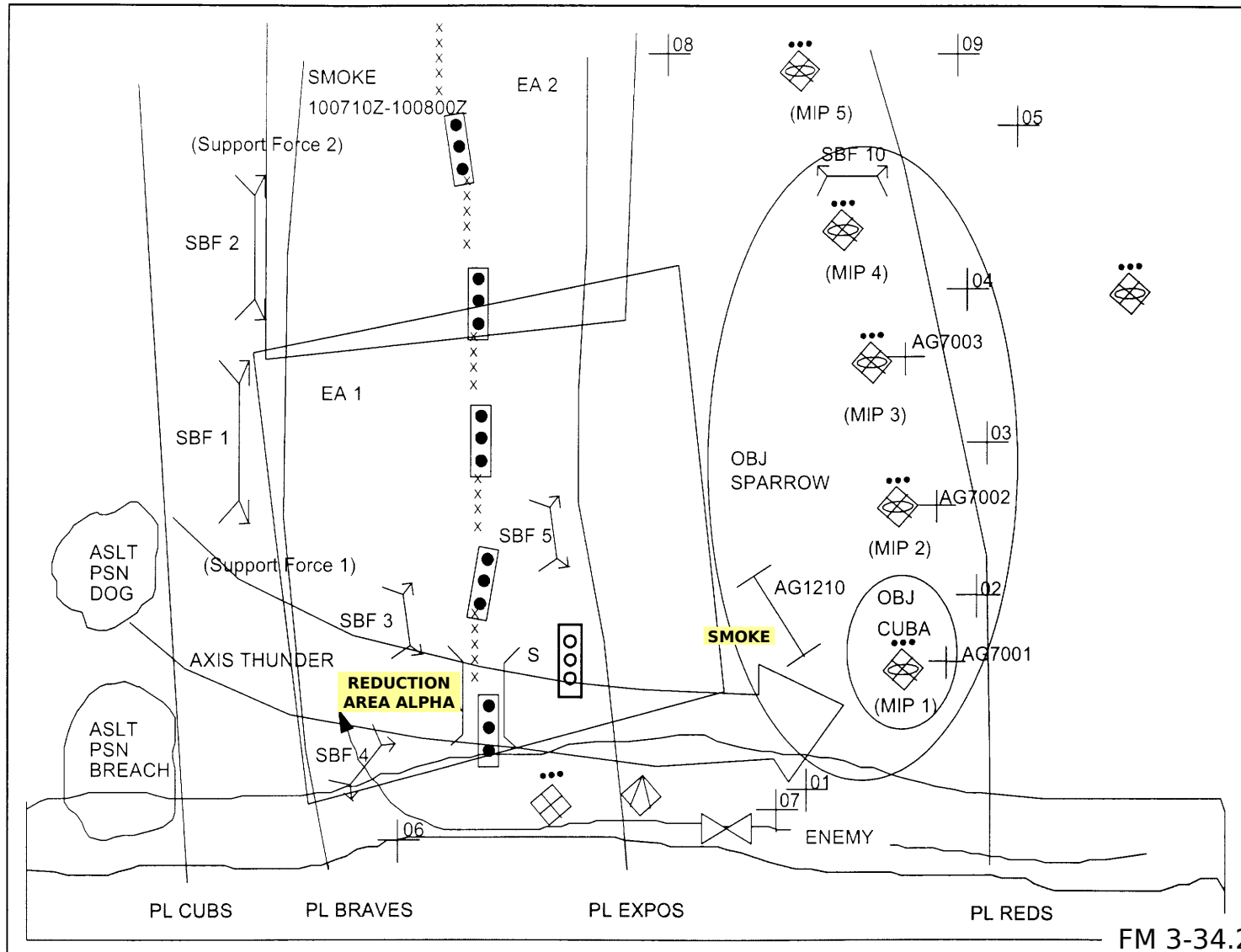
- **Visible are plots from each of the templated enemy locations to the expected EA.**
- **Visible area plots from potential SBF positions and points of breach to the templated enemy location.**
- **Oblique view of the AO.**
- **Perspective view of intervisibility lines.**
- **Visible area plots from NAIs, when NAIs are developed.**



# Typical CCIR for Breaching Operations



- Location, composition, and orientation of the obstacle and available bypasses in the vicinity of the reduction area and the point of penetration **(PIR)**.
- Location and composition of enemy forces that are capable of employing direct- and indirect-fires on the point of breach **(PIR)**.
- Maintenance status and location of all reduction assets **(FFIR)**.
- Status of commitment criteria for the breach force **(PIR and FFIR)**.







# Types of Breaching Operations Versus Enemy Sizes



Enemy Overwatching the Obstacle	Maneuver Units Conducting Breaching Operations		
	BCT	TF	CO/TM
Battalion	X		
Company	O	X	
Platoon		O	X
<b>Notes:</b> X = Normal (combat-power ratio 3:1) O = Desirable (combat-power ratio >3:1)			



# BREACHING TENETS



## **Intelligence**

**SITEMP, R&S Planning, OBSINTEL**

## **Breaching Fundamentals**

**Suppress, Obscure, Secure, Reduce, As**

## **Breaching Organization**

**Support Force(s), Breach Force, Assault Force**

## **Mass**

**Combat Power, Engineers, Breach Asset**

## **Synchronization**

**Detailed planning, Clear Subunit Tasks, C2, Rehearsals**



# SITEMP



**A SITEMP should include --**

- **Likely enemy EAs.**
- **The location and orientation of enemy forces.**
- **Counterattack OBJs and location of enemy reserve elements.**
- **The location and range of all direct- and indirect-fire systems.**
- **Enemy obstacle systems, including tactical and protective obstacles and SCATMINES; depicting CMOB capability.**
- **The enemy's use of NBC weapons, including the ranges of delivery systems.**
- **The location of enemy target-acquisition assets.**
- **Likely avenues of approach, incl. fixed- and rotary-wing A/C.**
- **Positioning of enemy ADA assets.**



# OBSINTEL



**“An unverified enemy template can lead to disaster because the force may aim an attack at the wrong place. Units may deploy to reduce obstacles early, wasting mission time to *feel* their way into nonexistent obstacles; or they may blunder into an unexpected obstacle or an enemy EA.”**

FM 3-34.2 para. 1-6



# OBSINTEL



“Obtaining OBSINTEL requires dedicated collection assets.”

FM 3-34.2 para. 1-9



# OBSINTEL



**Examples of information that is needed to fulfill obstacle IR include --**

- **The location of existing and reinforcing obstacles.**
- **The orientation and depth of obstacles.**
- **Conditions of the soil (in the case of a minefield) to determine the ability to use tank plows.**
- **The presence, location, and type of wire.**
- **Lanes and Bypasses.**
- **The composition of the minefield (types [AT/AP/AHD] and disposition of mines).**
- **Types of mines and fuses.**
- **The location of enemy indirect fire systems that can fire into the breach area.**
- **The composition of complex obstacles.**
- **Areas between successive obstacle belts.**



# BREACHING FUNDAMENTALS



## **S - SUPPRESS**

- \* **FOCUS ALL FIRES ON THE ENEMY.**
- \* **PURPOSE TO PROTECT FORCES REDUCING AND MANEUVERING THROUGH THE OBSTACLE AND TO SOFTEN THE INITIAL FOOTHOLD (ASSAULT FORCE OBJECTIVE).**
- \* **SUFFICIENT VOLUME (3:1 MINIMUM) TO ISOLATE BREACH SITE.**

## **O - OBSCURE**

- \* **HAMPERS ENEMY OBSERVATION AND TARGET ACQUISITION AND CONCEALS FRIENDLY ACTIVITIES AND MOVEMENT.**
- \* **EMPLOYED TO PROTECT OBSTACLE REDUCTION, PASSAGE OF ASSAULT FORCES.**

## **S - SECURE**

- \* **DEPLOYED TO ATTACK OUTPOSTS, FIGHTING POSITIONS NEAR OBSTACLES, OVERWATCH UNITS, AND COUNTERATTACK FORCES.**
- \* **SUFFICIENT FORCE TO SECURE BREACH SITE TO PREVENT THE ENEMY WITH INTERFERING WITH REDUCTION.**

## **R - REDUCE**

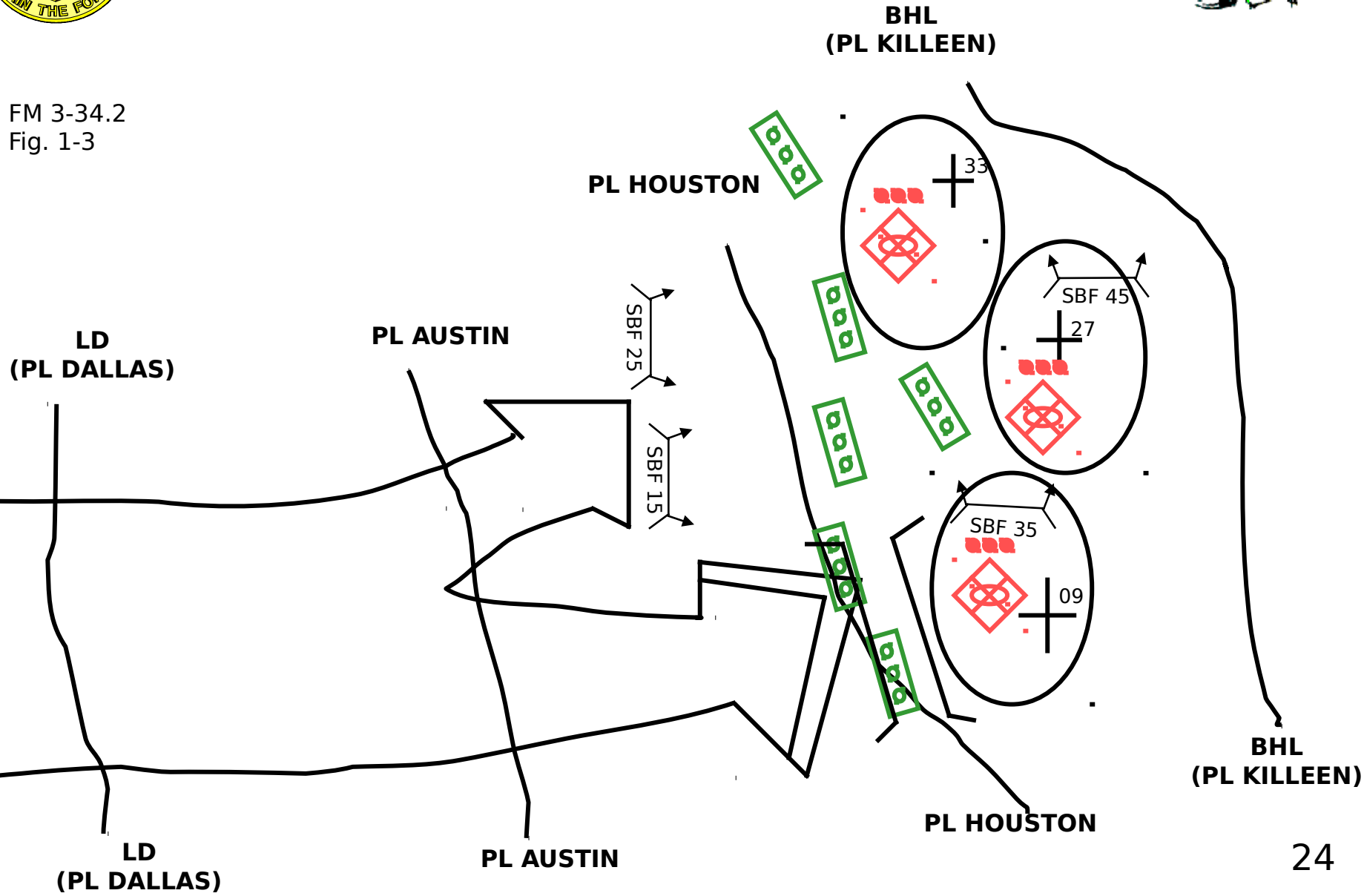
- \* **CREATE LANES THROUGH THE OBSTACLE.**
- \* **CANNOT BEGIN UNTIL THE OTHER SOSR FUNDAMENTALS ARE APPLIED AND BECOME EFFECTIVE.**



# Reverse Breach Planning

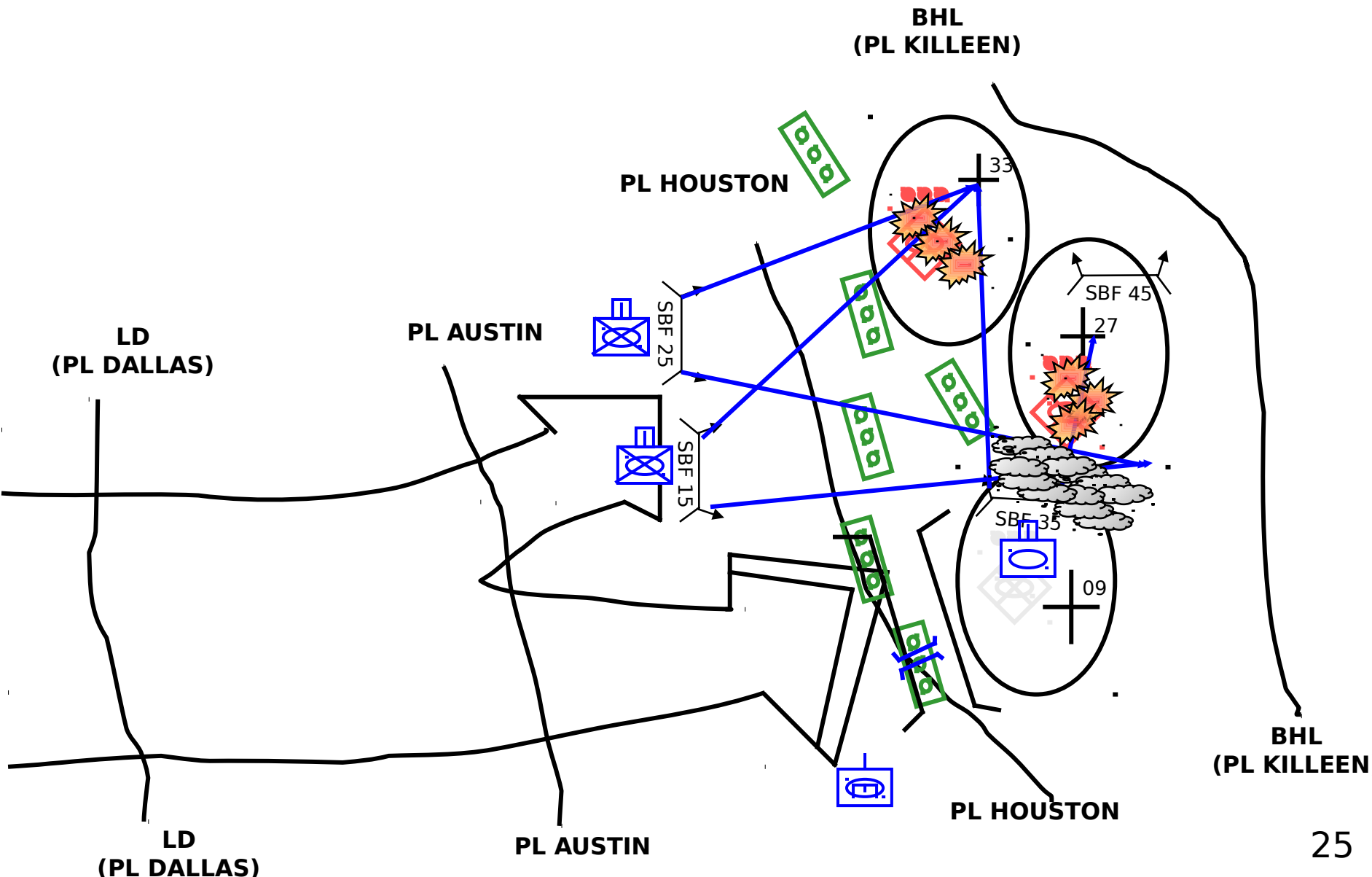


FM 3-34.2  
Fig. 1-3



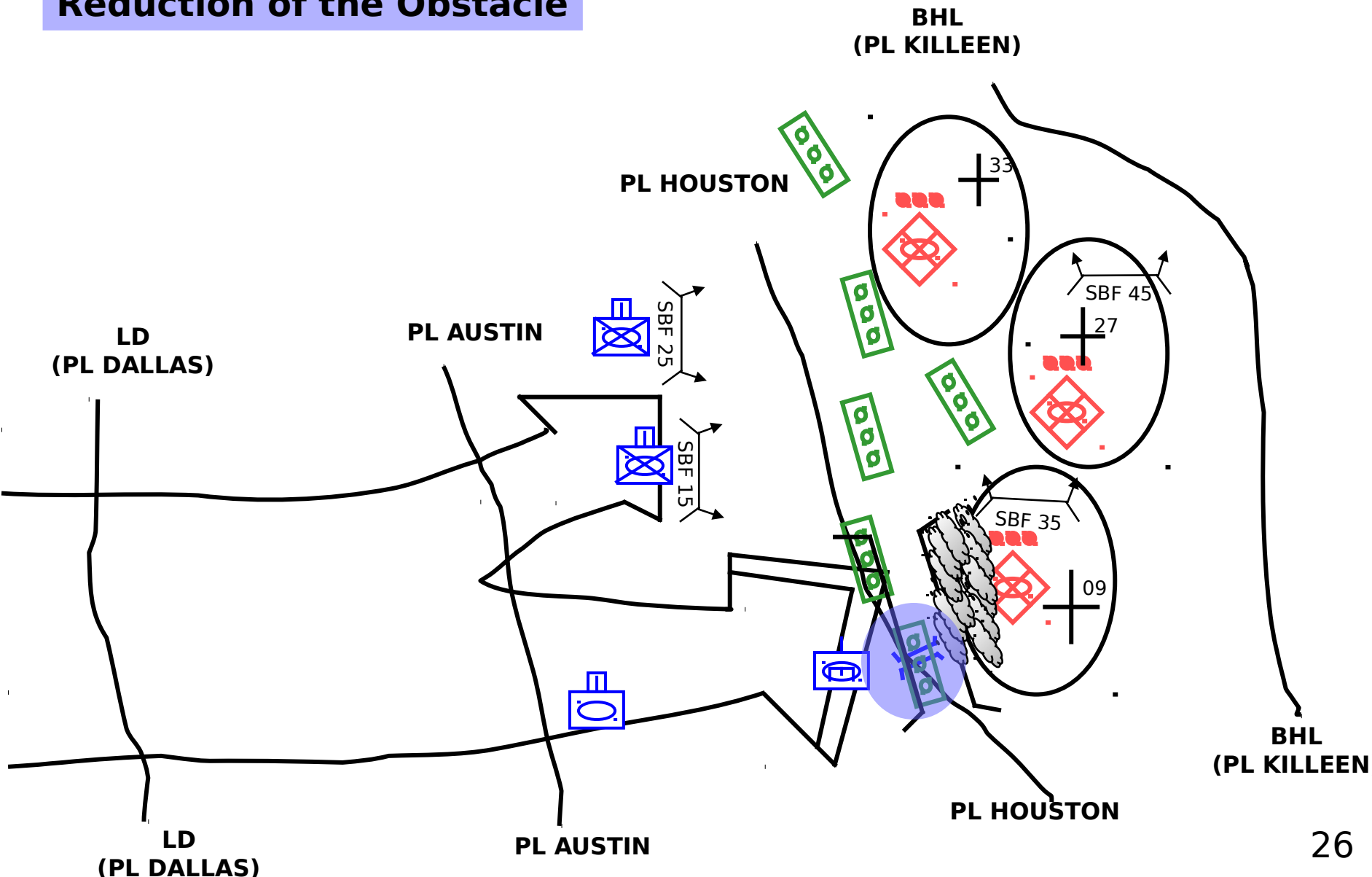


Size of Assault Force	Actions On The Objective
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**Local Security  
Reduction of the Obstacle**

Actions at Obstacles	Size of Assault Force	Actions On The Objective
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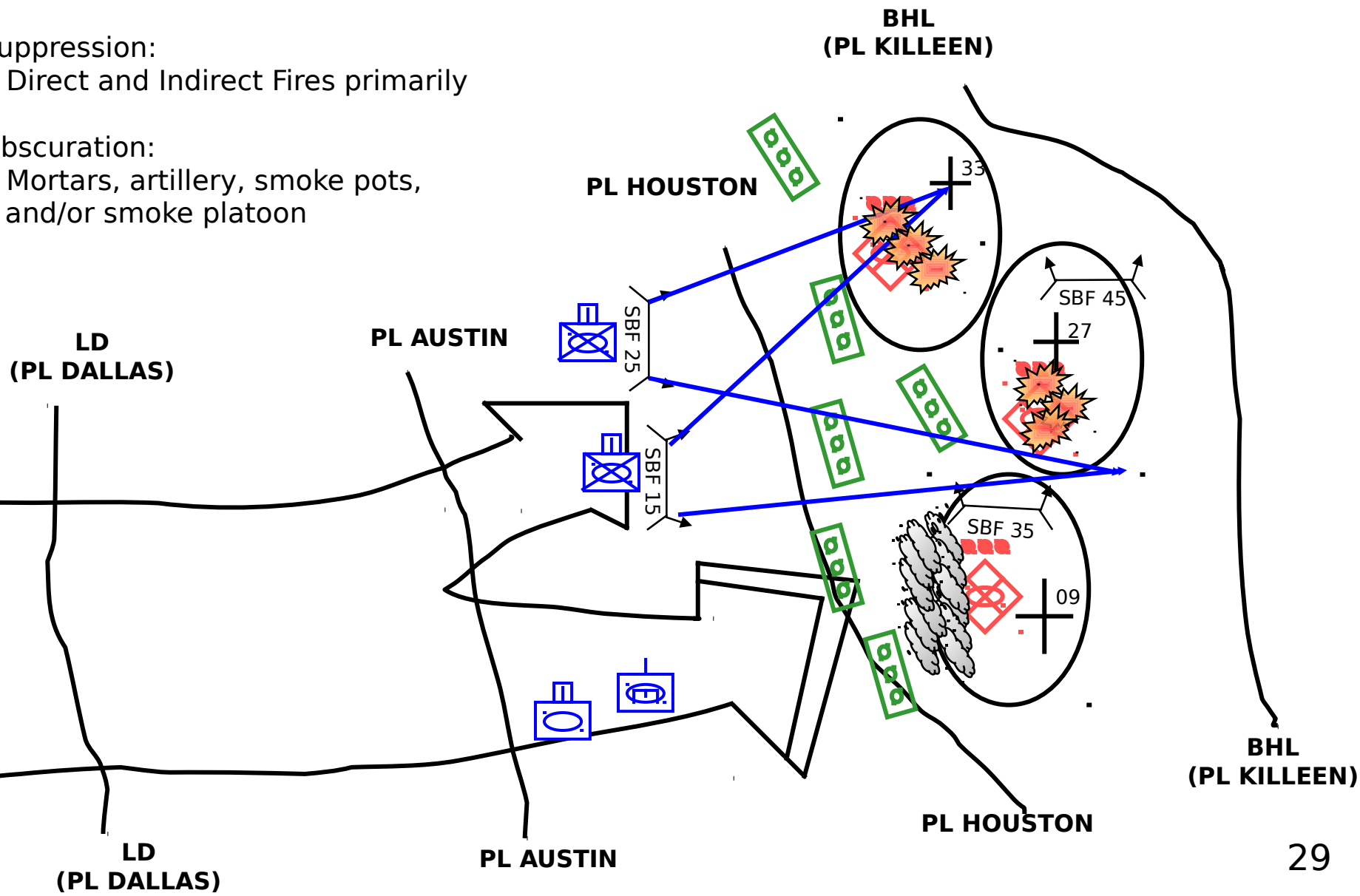
Amount Of Suppression and Obscuration	Size of Breach Force	Number & Location of Lanes	Actions at Obstacles	Size of Assault Force	Actions On The Objective
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Suppression:

- Direct and Indirect Fires primarily

Obscuration:

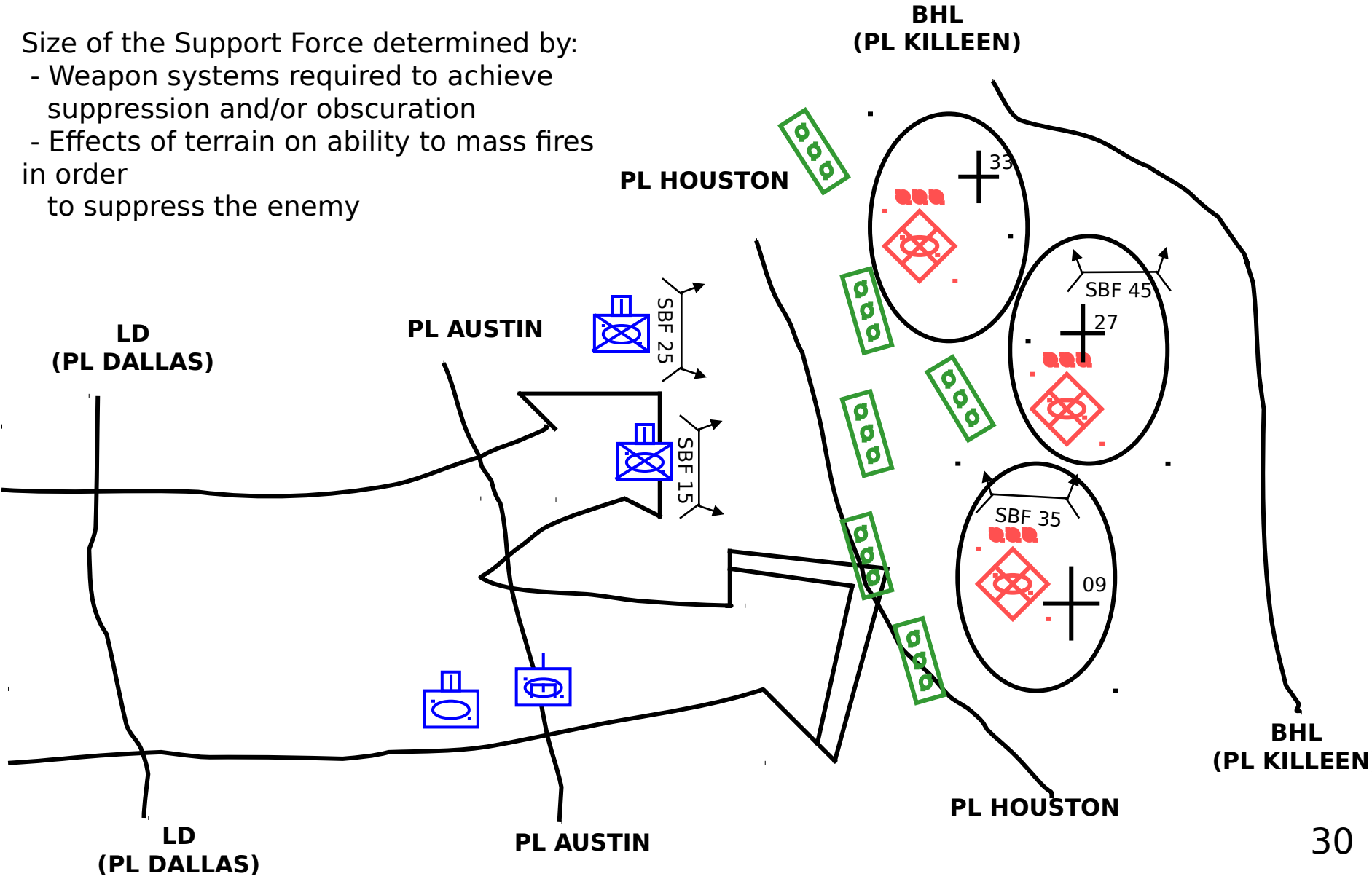
- Mortars, artillery, smoke pots, and/or smoke platoon



Size of Support Force	Amount Of suppression and obscuration	Size of Breach Force	Number & Location of Lanes	Actions at Obstacles	Size of Assault Force	Actions On The Objective
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Size of the Support Force determined by:

- Weapon systems required to achieve suppression and/or obscuration
- Effects of terrain on ability to mass fires in order to suppress the enemy





# Breach Planning Sequence



**Step 1:** Actions on the objective.

**Step 2:** Actions on the objective drives the **size and composition of the assault force**.

**Step 3:** The size of the assault force determines the **number and location of lanes** to be created.

**Step 4:** Lane requirements and the type of obstacle drive the **amount and type of mobility assets** task-organized to the breach force.

**Step 5:** The ability of the enemy to interfere with the reduction of the obstacle determines the **size and composition of the security element in the breach force**.

**Step 6:** The ability of the enemy to mass fires on the point of breach determines the **amount of suppression** required and the **size and composition of the support force**.



# Breach Complexity



Action	Element	Time (Minutes)	Controlled By
Develop the situation (verify the boundary of the enemy obstacle system).	Force in contact	M to 2	S3
Maneuver the support force into the overwatch position.	Support	M + 2 to 15	Support cdr
Maneuver the assault force into the covered assault position.	Assault	M + 2 to 15	Assault cdr
Call for artillery.	DS artillery	M + 2 to 15	FSO
Build smoke.	Mortars	M + 5 to 10	FSO
Suppress the enemy with direct fires.	Support	M + 15 to 29	Support cdr
Suppress the enemy with artillery fires.	DS artillery	M + 10 to 29	FSO
Maintain smoke.	DS artillery/mortars	M + 10 to 30	FSO
Maneuver the breach force to the breach location.	Breach	M + 20 to 23	Reduction cdr
Reduce the obstacle, and prepare two lanes.	Breach	M + 23 to 30	Engineer ldr
Place smoke pots.	Breach	M + 23 to EOM	Reduction cdr
Shift direct fires off the objective.	Support	M + 29 to 30	Assault cdr
Shift indirect fires beyond the objective.	DS artillery	M + 29 to 30	Assault cdr
Assault to destroy the enemy on the far side of the obstacle.	Assault	M + 30 to 45	Assault cdr
Reorganize to continue the mission.	TF	M + 45 to EOM	S3
<b>NOTE: M = Contact with the obstacle</b>			





# Technique for Achieving Mass in the Breach

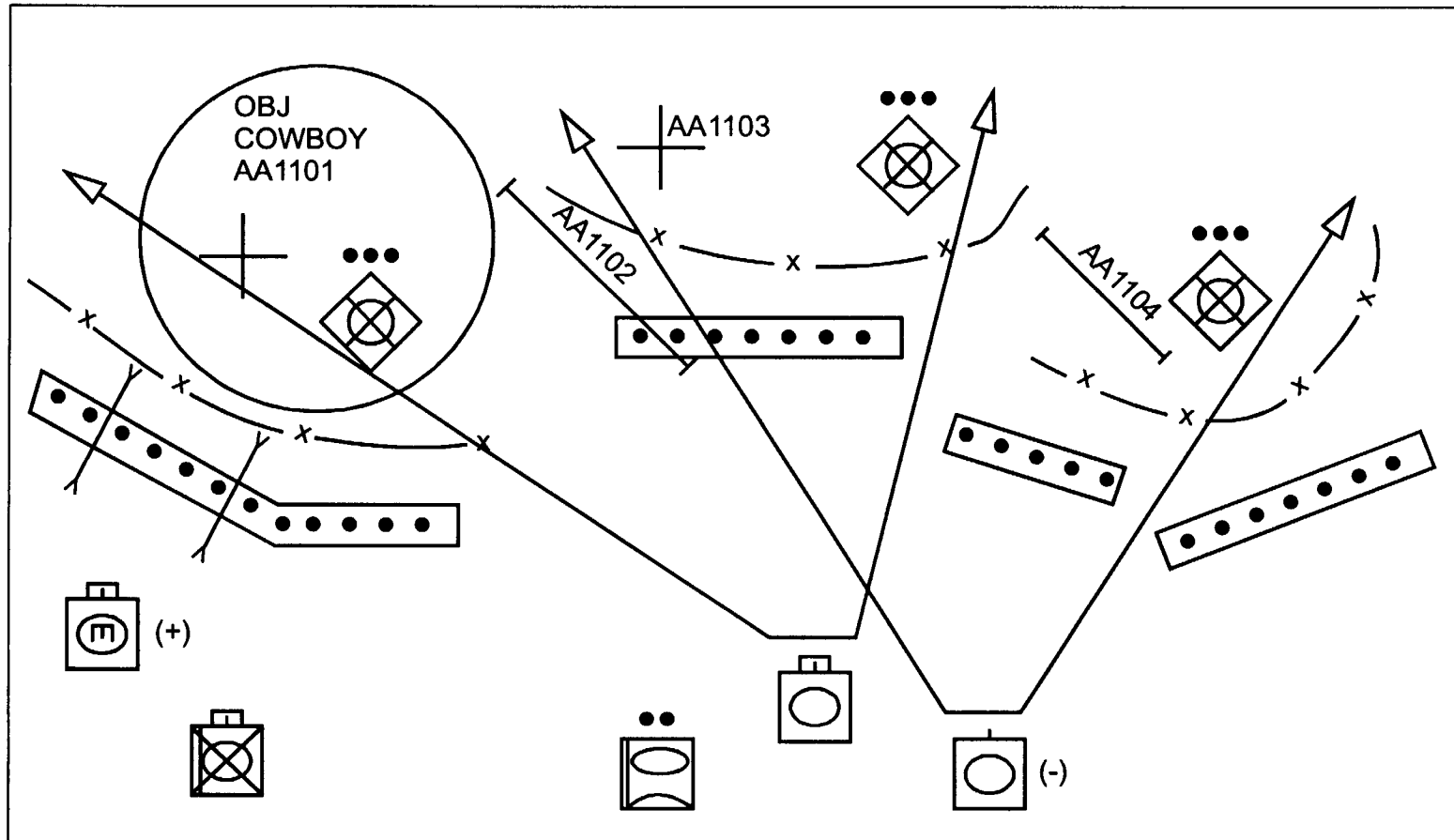
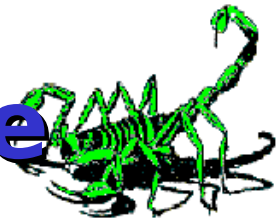


Figure 1-2. Technique for Achieving Mass in the Breach



# SOSRA Criteria Technique



## DECISIONS

## CRITERIA

- **Decide the point of penetration and reduction sites**
  - Breach force identifies obstacles and enemy positions
- **Commence suppression and obscuration fires**
  - Observers are in position
  - Support force crosses Phase Line "XX"
- **Support force occupies the support by fire (SBF) position**
  - Critical Friendly Zone in place over the SBF Position
  - Obscuration in place to screen support force movement
  - Support force maintains more than 70% combat power
- **Commit the breach force**
  - Suppression and obscuration is adjusted and effective
  - CFZ in place over reduction site
  - Engineer preparations complete
  - Fire control measures are in effect
  - ADA coverage is set
- **Commit the reduction element**
  - CASEVAC assets prepared to accept casualties
- **Commit the assault force**
  - Breach force near-side security is in position
  - Security element controls the reduction site by force or fires



# **Support Force Tasks and Responsibilities**



- **Suppress enemy elements capable of placing direct-fires on the point of breach to protect the breach force.**
- **Suppress enemy elements capable of placing direct-fires on the assault force.**
- **Call for and adjust indirect-fires, including obscuration.**
- **Fix enemy forces that are capable of repositioning.**

FM 3-34.2



# **Breach Force Tasks and Responsibilities**



- **Reduce lanes in the obstacle.**
- **Provide local security (far side and near side).**
- **Provide additional suppression of enemy forces overwatching the obstacle.**
- **Mark and report the location of created lanes.**
- **Assist the passage of the assault force through created lanes.**

FM 3-34.2



# **Assault Force Tasks and Responsibilities**



- **Seize the far side objective.**
- **Reduce protective obstacles.**
- **Prevent enemy direct fires from interfering with follow-on forces as they pass through lanes.**
- **Provide clear routes to the BHL for follow-on forces.**
- **Conduct battle hand-over with follow-on forces.**

FM 3-34.2



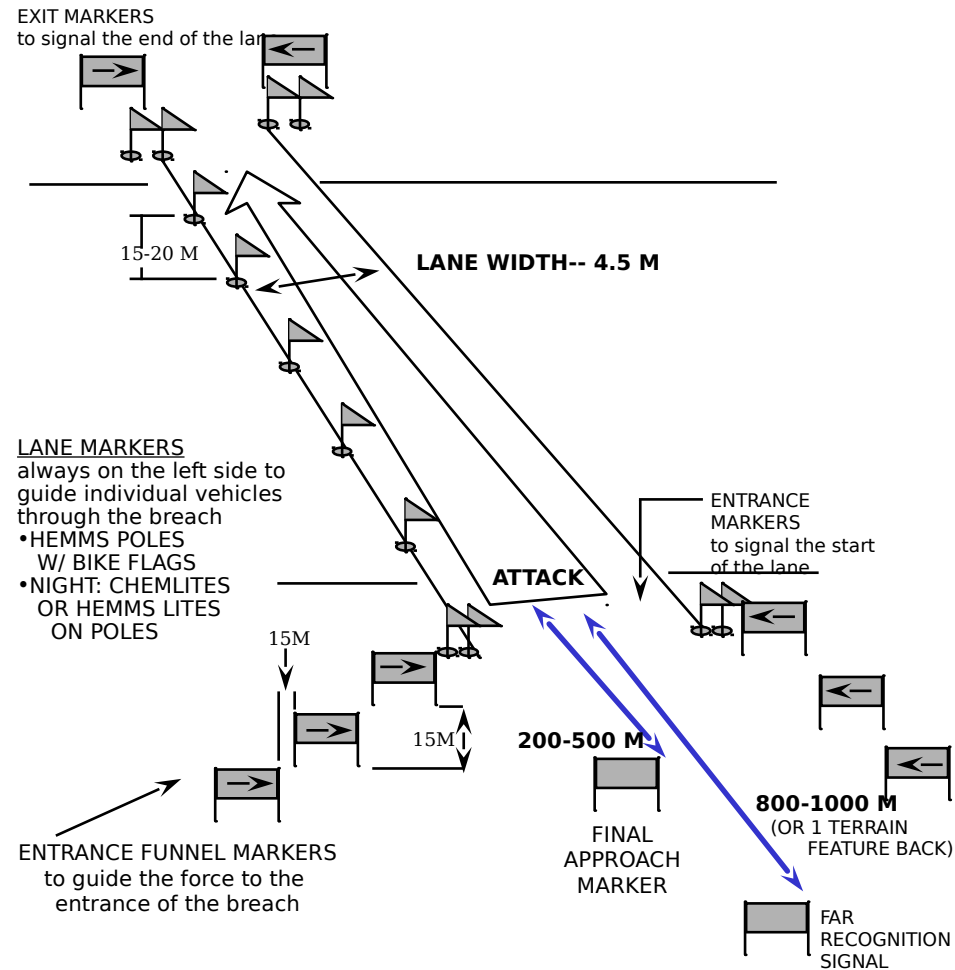
# **TF RESPONSIBILITIES DURING BREACH OPERATIONS**



- \* RESOURCES COMPANY/TEAM WITH ADDITIONAL/SPECIAL ASSETS (ENGINEERS, RECON, SMOKE, RETRANS, COLTS, GSR, IEW, ADA)**
- \* FIXES ENEMY FORCES TO PREVENT REPOSITIONING OR INTERFERENCE WITH THE BREACH**
- \* ISOLATES THE PENETRATION TO SET CONDITIONS OR PREVENT ENEMY COUNTERATTACK**
  - ARTILLERY FIRES => OBSERVATION PLAN**
  - ATTACK AVIATION**
  - CAS**
  - SCATTERABLE MINES**
  - OBSCURATION**
  - IEW**
  - ADA**
- \* PLANS A FPOL BY FOLLOW-ON FORCES THRU A UNIT CONDUCTING A BREACH**
  - WIDEN OR REDUCE ADDITIONAL LANES**
  - UPGRADE AND MAINTAIN LANE MARKING**
  - ASSUMES CONTROL OF ALL LANES AND TRAFFIC UP TO THE BHL**
- \* PROVIDES CRITERIA FOR TRANSITION FROM A COMPANY/TEAM LEVEL BREACH TO A TASK FORCE LEVEL BREACH**



## BREACH LANE MARKING - INITIAL

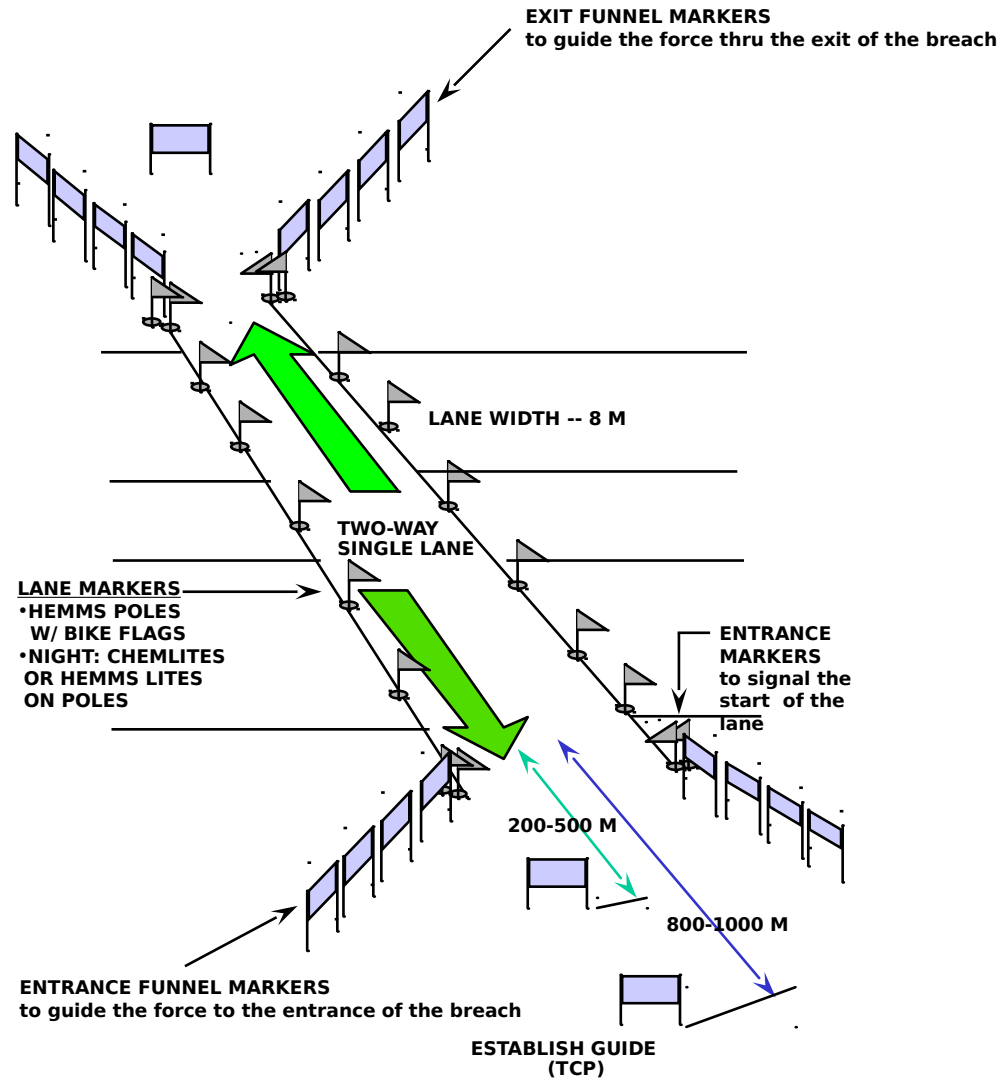


### RECOGNITION SIGNALS

- DAY -- VIOLET SMOKE (CLOSE) / GREEN STAR CLUSTER (FAR)
- NIGHT -- GREEN STAR CLUSTER (ALL)



## BREACH LANE MARKING - INTERMEDIATE







# Traffic Control



**Plan for traffic control points or guides with communication equipment to assist commanders with traffic control**

**Traffic control point or guide gives the approaching commander the azimuth and distance to the final approach marker and a description of the marker. *This gives the commander time to adjust his plan for the lane passage and react to the enemy situation.***

**“A Way” - Use a reconnaissance element to follow the breach force and lead the assault force through the lane**

FM 3-34.2 para. 3-11 & 3-12



# C2 RESOPONSIBILITIES FOR LANES AND TRAFFIC CONTROL



## **BN RESPONSIBILITIES**

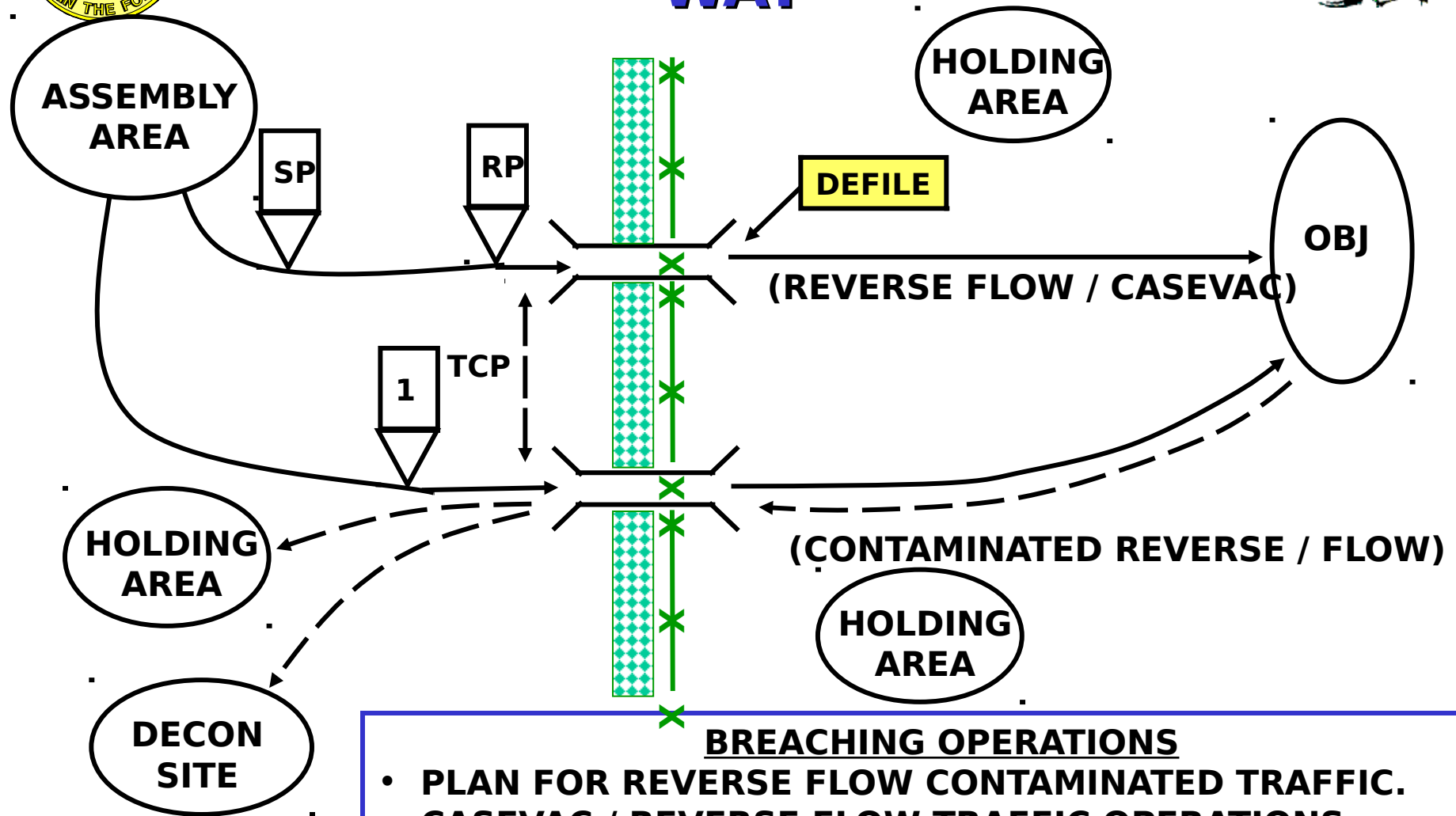
- \* REDUCES, PROOFS, AND MARKS INITIAL LANES IN OBSTACLE
- \* ASSISTS IN PASSAGE OF ASSAULT FORCE
- \* ASSISTS IN PASSAGE OF FOLLOW-ON FORCES

## **BDE RESPONSIBILITIES**

- \* ASSUMES CONTROL OF LANES IN TACTICAL OBSTACLES
- \* WIDENS INITIAL LANES FOR 2-WAY TRAFFIC
- \* REDUCES, PROOFS, MARKS ADDITIONAL LANES
- \* UPGRADES/MAINTAINS LANE MARKING
- \* ASSUMES CONTROL OF ALL LANES AND TRAFFIC UP TO THE BHL



# MOVEMENT CONTROL: "A WAY"



## BREACHING OPERATIONS

- PLAN FOR REVERSE FLOW CONTAMINATED TRAFFIC.
- CASEVAC / REVERSE FLOW TRAFFIC OPERATIONS THROUGH BREACH LANES ARE IMMEDIATELY HAZARDOUS



# **TRIGGERS FOR SMOKE**



## **IF SCREENING MOVEMENT...**

**TRIGGER MUST PROVIDE TIME TO ADJUST AND BUILD SMOKE BEFORE TF MOVEMENT IS VISIBLE TO THE ENEMY. TARGET MUST BE PLACED BETWEEN ENEMY OBSERVERS AND TF.**

## **IF OBSCURING SBF FROM DIRECT FIRE...**

**TRIGGER MUST PROVIDE TIME TO ADJUST AND BUILD OBSCURATION ON ENEMY BEFORE SBF FORCE CLOSES WITHIN 4 km OF ENEMY. TARGET ON ENEMY THAT CAN FIRE ON SBF.**

## **IF OBSCURING BREACH FORCE FROM MRPs AT ZOP...**

**TRIGGER MUST PROVIDE TIME TO ADJUST AND BUILD OBSCURATION ON ENEMY MRPs BEFORE BREACH FORCE CLOSES WITHIN DIRECT FIRE RANGE OF MRPs. TARGET ON ENEMY THAT CAN FIRE ON BREACH FORCE.**



# SYNCHRONIZED EMPLOYMENT OF SMOKE IN THE ATTACK "A WAY"



**KNOWN ENEMY  
STRONGPOINTS  
SMOKED BY ARTY**

**SPT FORCE  
MANEUVERS INTO  
PSN & FORMS  
BASE OF FIRE**

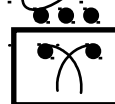
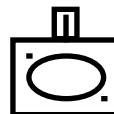
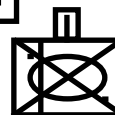
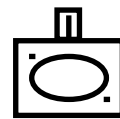
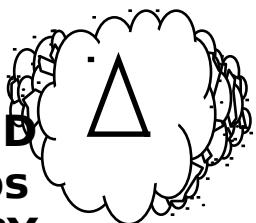
**COVERED BY  
SMOKE BREACH  
FORCE  
MANEUVERS INTO  
PSN**

**SMK PLT  
ESCORTED BY  
SECURITY MAKES  
CURTAIN OF SMK  
BETWEEN POP &  
ENEMY**

**KNOWN &  
SUSPECTED  
ENEMY PSN  
SMKD BY  
ARTY**



**KNOWN  
ENEMY &  
SUSPECTED  
ENEMY Ops  
SMOKED BY  
ARTY**



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# Commitment of the Breach Force



**The commitment of the breach force is a critical decision point that must be included in the DST. Commitment criteria elements **may** include the following --**

- **Destruction of certain vehicles or a certain number of vehicles.**
- **Effective suppression of the enemy by the support force.**
- **Effective obscuration of the enemy.**
- **Remaining strength of the support force.**
- **Remaining reduction assets available to the breach force.**
- **Activation of CFZ.**
- **Air-defense assets in position.**



# MOVEMENT TO CONTACT



# Engineer Checklist For Movement To Contact



## PLANNING:

### Mission Analysis:

- EBA (MCOO, Friendly engineer capabilities, enemy engineer capabilities)
- Template expected enemy engineer assets
- Analyze enemy mission and combat capabilities, to include weapons and their effective ranges
- Analyze threat engineer organizations and their manpower and equipment capabilities
- Estimate enemy capabilities to employ scatterable mines, and emplace conventional minefields
- Identify AAs from the flanks during the attack and the need for flank protection
- Identify AAs upon consolidation which support the transition to the defense
- Recommend IR and PIR and integrate into R&S plan
- Review all templates (doctrinal, situational, event, and DST)
- Recommend HVTs (scatterable mine delivery systems)
- Identify mechanical breaching capabilities (to include mine plows)
- Check maintenance status

### COA Development:

- Use MCOO to position forces and analyze fire control
- Determine if a breaching operation is required
- Identify engineer critical tasks to support the scheme of maneuver
- Develop CL IV & V supply requirements

### War-gaming:

- War-game FASCAM employment- achieve effect (eyes, trigger, executioner)
- Focus on synchronization
- Record situational obstacle employment on the DST and Synchronization matrix





# Engineer Checklist For Movement To Contact (Continued)



## **WAR-GAMING**

- Develop the Synchronization matrix and timeline
- Ensure ADA coverage of breach points and critical movement routes
- Coordinate with the CSS rep to identify CL IV & V limitations and request additional support
- Anticipate losses and pass information to the S-1
- Identify C2 requirements for the movement of follow-on forces and equipment
- Plan transition to the defense

## **PREPARATION**

- Prepare the commanders' battle tracking and concept cards
- Monitor the request for CL IV & V materials and haul support
- Check the positioning and timing of artillery support and the fire support overlay for FASCAM and targets
- Monitor status of breach assets and marking materials
- Attend the rehearsal
- Submit scatterable minefield reports, records, and warnings
- Check TOC operations (message logging, battle tracking, information dissemination, etc.)

## **EXECUTION**

- Track enemy and friendly locations and critical events
- Track the DST/matrix and keep the commander informed
- Track the employment of enemy and friendly FASCAM
- Send scatterable mine warnings to subordinate units
- Track battlefield losses
- Track the positioning of Class IV & V supplies



# DEFENSE



# Engineer Checklist For A Deliberate Defense



## PLANNING:

### Mission Analysis:

- EBA (MCOO, Friendly engineer capabilities, enemy engineer capabilities)
- Develop doctrinal and situational templates (threat engineer order of battle, mobility countermobility capabilities, and position on the battlefield)
- Recommend IR and PIR and integrate into R&S plan
- Recommend HVTs (scatterable mine delivery systems)
- Recommend priorities of countermobility and survivability
- Recommend directed, reserve, and situational obstacle employment
- Analyze the AAs

### COA Development:

- Develop the engineer estimate and time line
- Develop obstacle control measures
- Develop CL IV & V supply requirements, allocations, distribution and locations
- Develop mobility requirements for security and counterattack forces and sustainment operations (locations of lanes)
- Use MCOO to position forces and analyze fire control

### War-gaming:

- Allocate engineer forces (Economy of Force effort?)
- Check EAs, BPs, and engagement criteria
- War-game FASCAM employment- achieve effect (eyes, trigger , executioner)
- Focus on synchronization (timeline rechecked)
- Record situational obstacle employment on the DST and Synchronization matrix
- Determine CFZ's for engineer operations
- Ensure ADA coverage of engineer operations
- Plan transition to the offense
- Develop disengagement criteria for survivability assets
- Check obstacle plans and confirm feasibility



# Engineer Checklist For A Deliberate Defense (Continued)



## PREPARATION

- Prepare the commanders' battle tracking and concept cards
- Monitor timeline, update battle tracking cards, and report progress
- Track CL IV & V locations and amounts
- Revise countermobility and survivability timelines
- Review TF plans and overlays to ensure proper EA development and compliance with the BDE Cdr's intent and synchronization between obstacle effect and fires
- Attend the rehearsal
- Submit scatterable minefield reports, records, and warnings
- Check TOC operations (message logging, battle tracking, information dissemination, tracking of DA Form 1355, etc.)

## EXECUTION

- Track enemy and friendly locations and critical events
- Track the DST/matrix and keep the commander informed
- Track the employment of enemy and friendly FASCAM
- Send scatterable mine warnings to subordinate units
- Track battlefield losses
- Track the positioning of Class IV & V supplies
- Trigger lane closures
- Trigger the execution of situational obstacles



# **DEFENSE THE SEVEN STEPS**



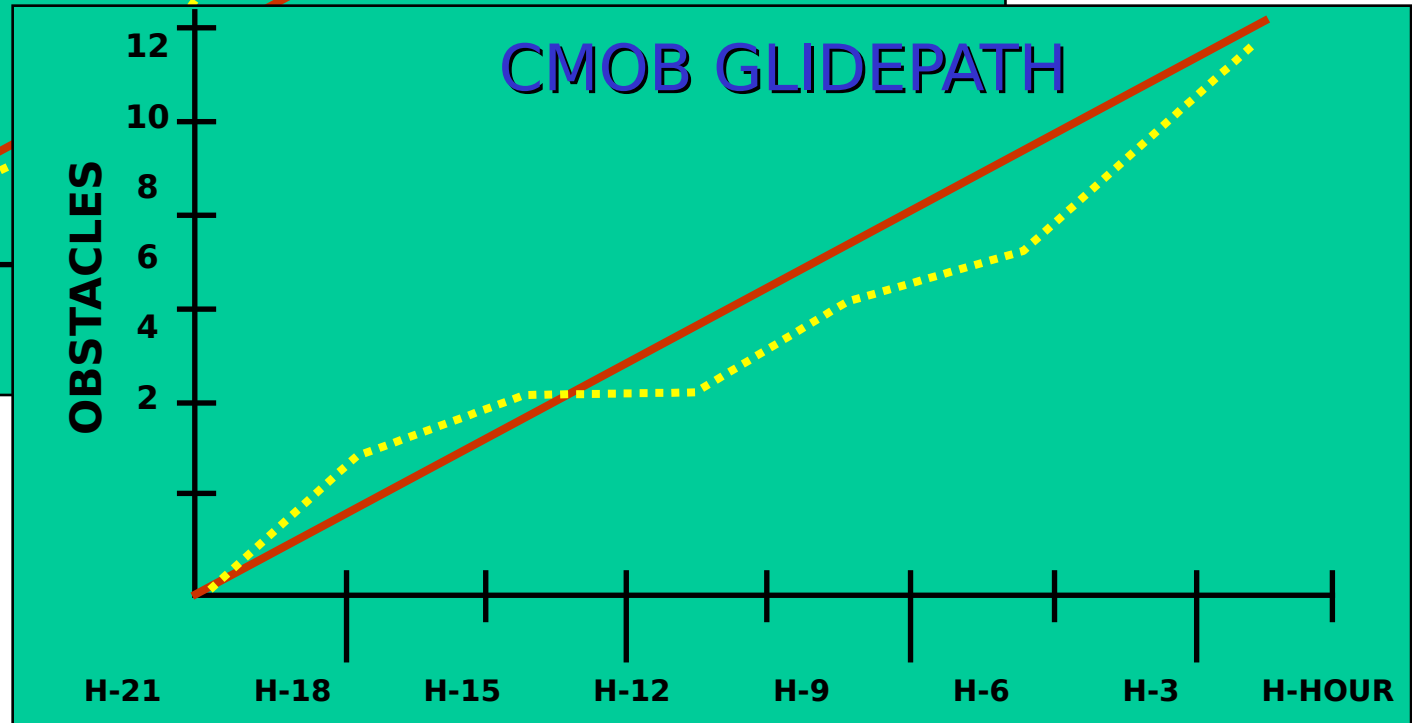
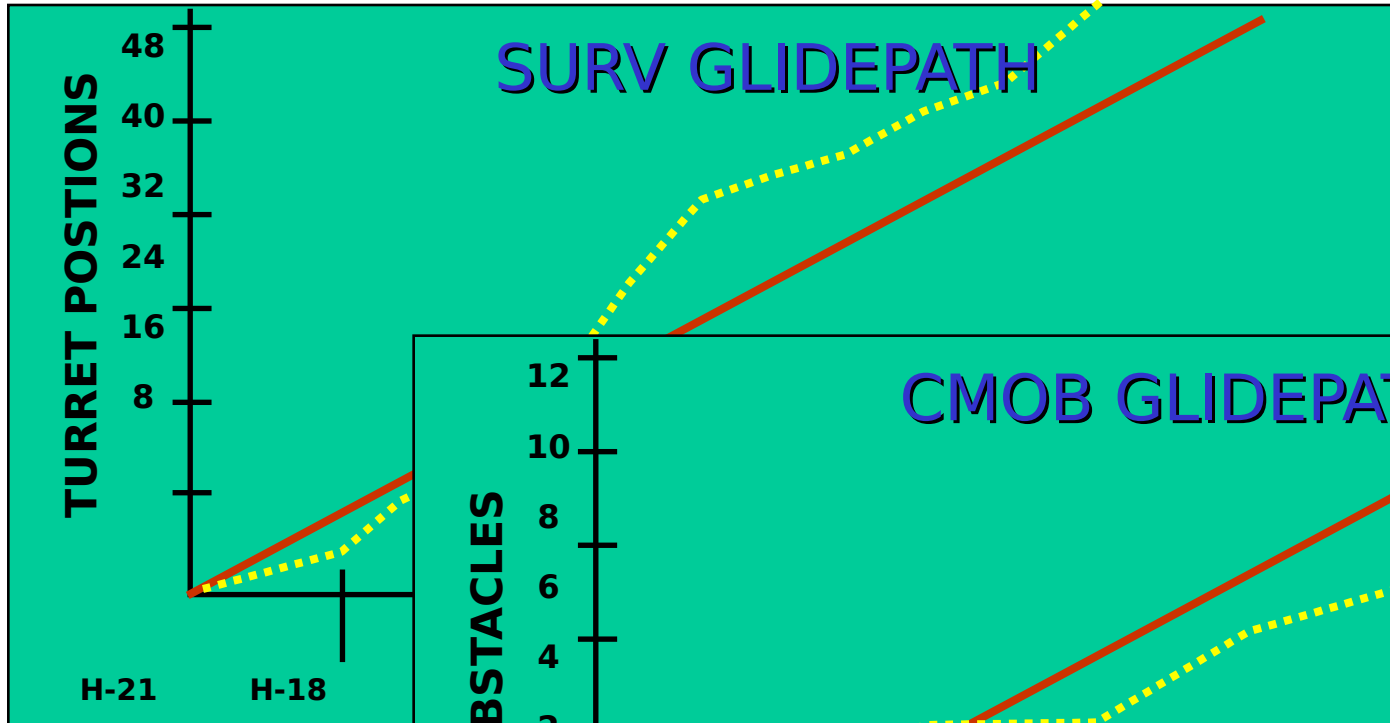
## **MAP RECON - LEADERS RECON - PREP PHASE**

- 1. KNOW THE ENEMY AND VISUALIZE HOW HE WILL FIGHT**
- 2. SELECT WHERE AND DETERMINE HOW TO KILL THE ENEMY**
  - NORMALLY MORE THAN ONE PLACE**
  - PERFORM BATTLE CALCULUS**
- 3. POSITION OBSTACLE GROUPS TO SUPPORT DIRECT FIRES**
- 4. PLAN INDIRECT FIRES TO SUPPORT DIRECT FIRES**
- 5. POSITION FORCES TO KILL HIM WITH DIRECT FIRES**
- 6. COMPLETE THE PLAN, SITE/EMPLACE OBSTACLES, PREPARE POSITIONS**
- 7. REHEARSE (with obstacle effects)**

**CAN BE DONE SIMULTANEOUSLY / MUST BE DONE REPETITIVELY**

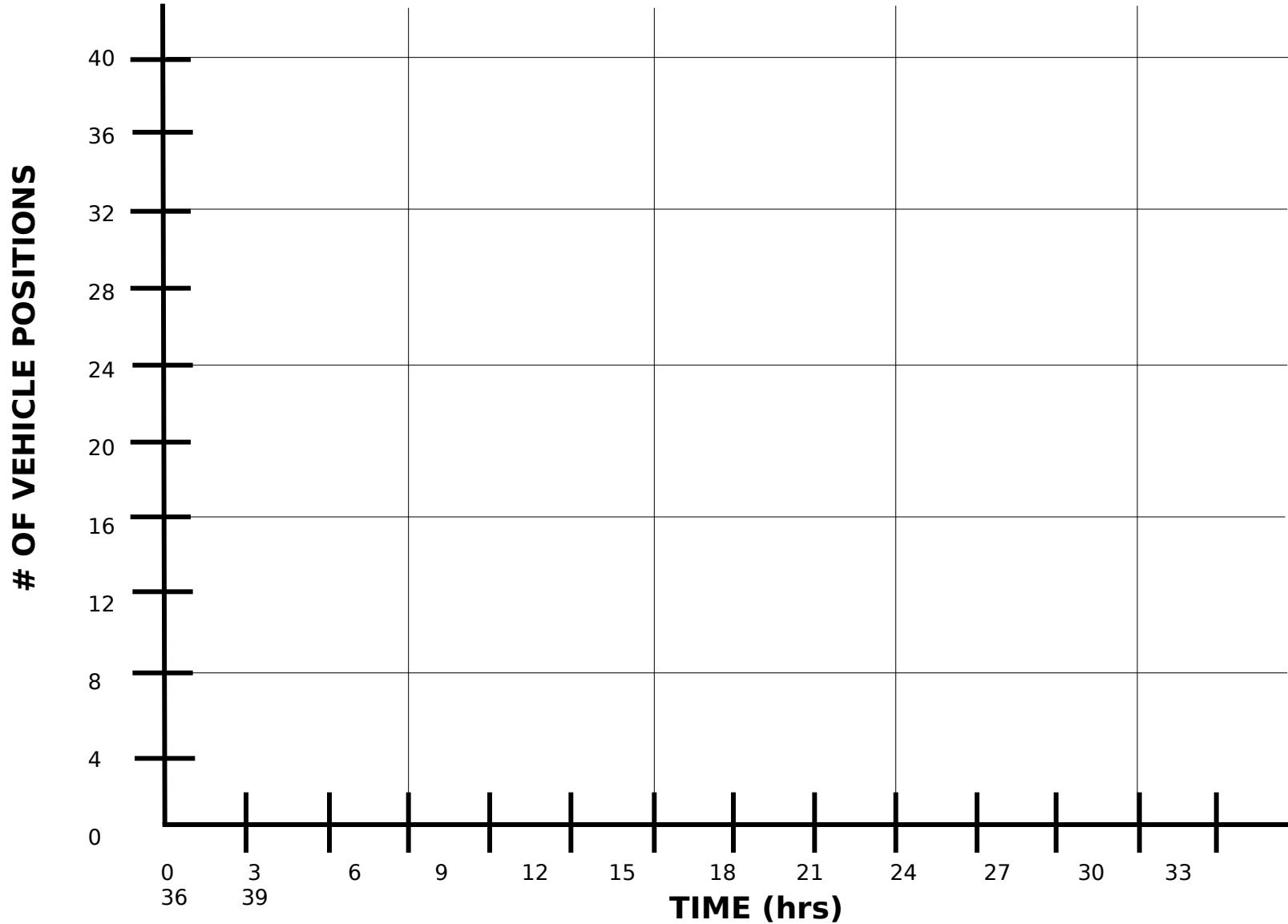


# TRACKING ENGR PREP

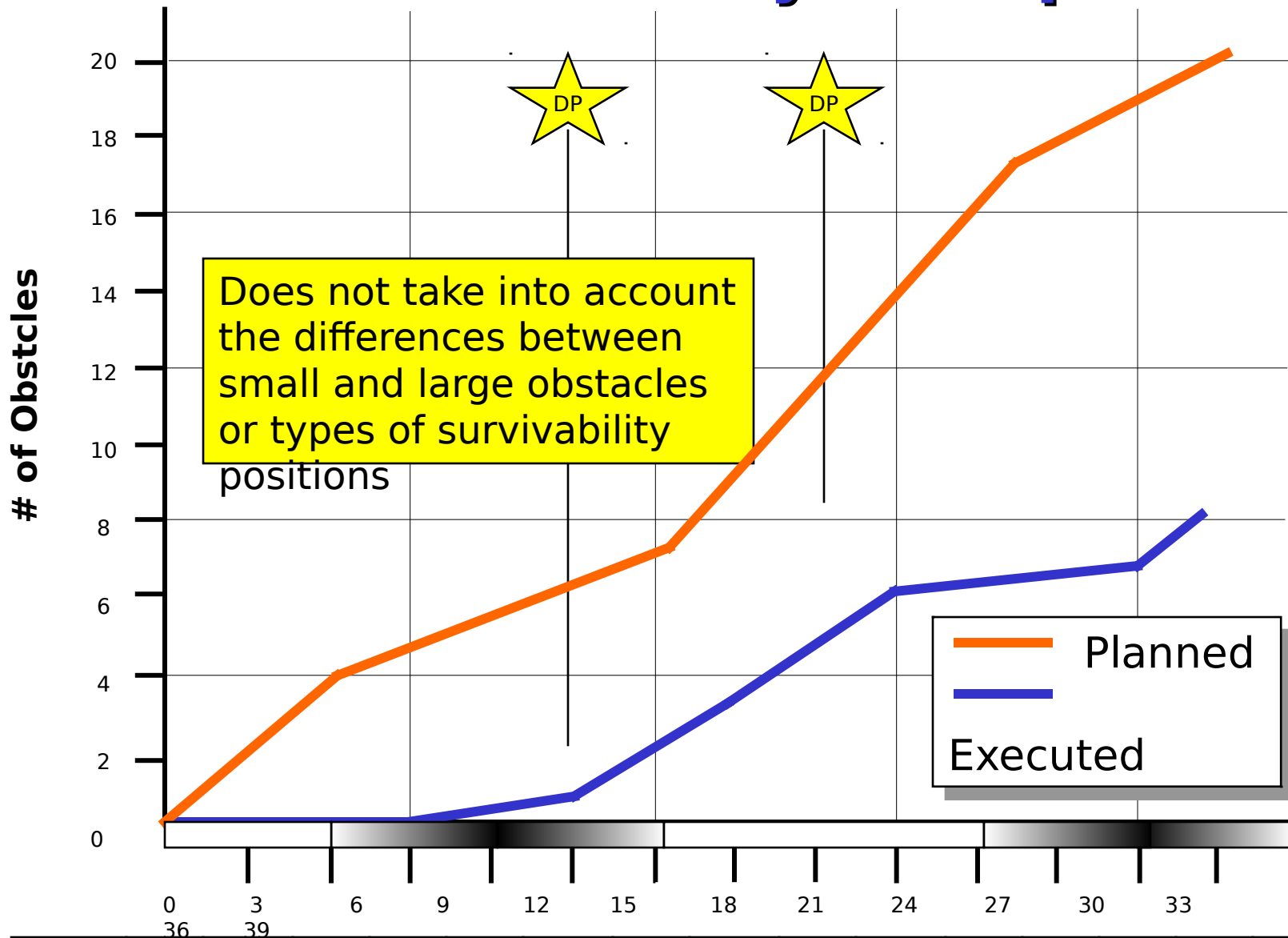




# SURV GLIDEPATH



# Counter mobility Glidepath

[illegible]



\_\_\_\_\_



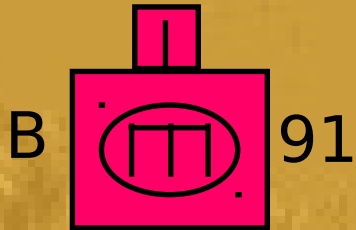
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# TF 1-5 CAV



## RESOURCES



Obstacles	Planned	Executed	To Standard
Total			

Assets	Avail
Squads	
M113	
D7	
ACEs	
SEEs	
Hornets	
V. Loads	
MOPMS	

## SURVIVABILITY

Positions	Planned	Executed	To Standard
M1 (Turret)			
M1 (Hull)			
M2 (Turret)			
M2 (Hull)			
FIST-V			
Individual			
Total			



# ATD vs. Vehicle Fighting Positions



## ***What's the trade-off?***

***Meters of Anti-Tank Ditch completed:***

***Number of Vehicle Fighting Positions planned:***

***Number of Vehicle Fighting Positions completed:***

***Number of Vehicle Fighting Positions possible without digging an ATD:***



# **TF ENGINEER AND STAFF INTEGRATION**



- DEVELOP AND MONITOR DEFENSIVE OPERATIONS TIMELINE -  
REVISE TIMELINE AS SITUATION DICTATES.**
- ENSURE COMMANDERS UNDERSTAND THE CURRENT STATUS  
OF M/CM/S OPERATIONS.**
- ENSURE THAT EBA REFLECTS FRIENDLY CAPABILITIES.**
- PASS EBA DOWN TO SUBORDINATES TO SUPPORT THEIR  
PLANNING.**
- IDENTIFY REQUIREMENTS FOR SCATMINES (SITUATIONAL OR  
DIRECTED).**
- REVIEW TF PLANS AND OVERLAYS TO ENSURE THAT Eas ARE  
PROPERLY DEVELOPED AND THAT COMMANDER'S INTENT IS  
ACHIEVED.**



# THE TF ORDER SHOULD:



- \_\_\_ **ESTABLISH INTENT & PRIORITY**
- \_\_\_ **DIRECT TIME / LOCATION TO ESTABLISH CL IV / V POINTS.**
- \_\_\_ **DIRECT LINK-UP OF AUGMENTATION.**
- \_\_\_ **CONSIDER COMPANY PLANNING TIME.**
- \_\_\_ **SPECIFY TASK FORCE DIRECTED CM / SURV EFFORT.**
- \_\_\_ **DIRECT ENGR TRANSITION TIME / CRITERIA BETWEEN BPs.**
- \_\_\_ **DIRECT ENGR DISENGAGEMENT CRITERIA BASED ON CRITICAL  
EVENT (COULD BE FRIENDLY OR ENEMY).**
- \_\_\_ **DIRECT ENGR FOLLOW-ON MISSION.**
- \_\_\_ **ESTABLISH C2 FOR TRACKING THE EFFORT**



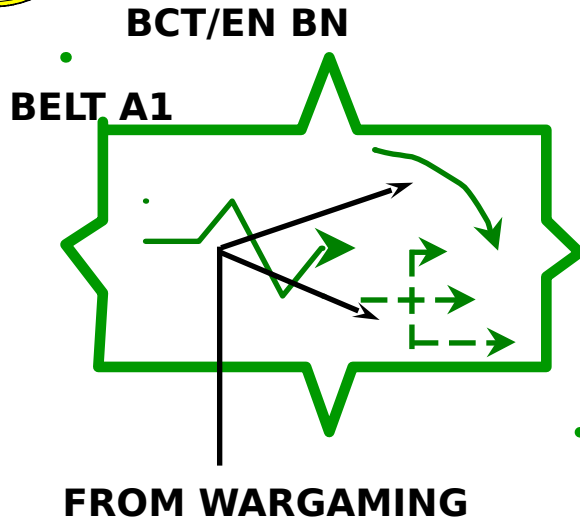
# DEFENSIVE PLANNING RESPONSIBILITIES



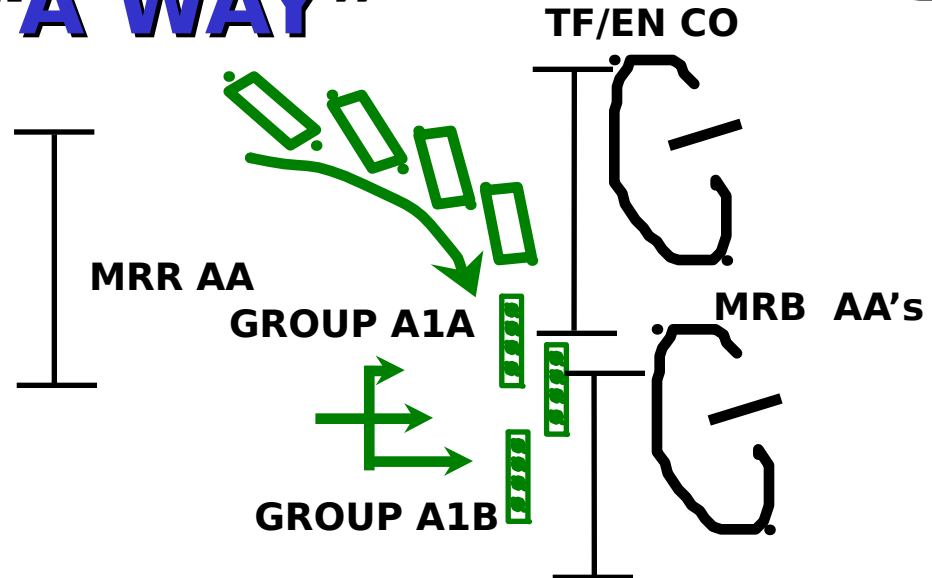
BCT	TF	MANEUVER TM	EN
<ul style="list-style-type: none"> <li>* SPECIFY BELTS TO CONVEY AUTHORITY</li> <li>* ESTAB OBSTACLE BELT INTENT/PRIORITY</li> <li>* RESOURCE MATERIAL, MANPOWER, AND TIME</li> <li>* DESIGN &amp; RESOURCE BRIGADE OBSTACLES:               <ul style="list-style-type: none"> <li>- DIRECTED</li> <li>- SITUATIONAL</li> <li>- RESERVE</li> </ul> </li> <li>* CL IV / V PUSH / RECOVERY</li> <li>* TRANSITION / SHIFT OF ENGR ASSETS</li> <li>* DIRECT LINK-UP OF AUGMENTATION</li> <li>* TRACK TRIGGERS</li> <li>* DISENGAGEMENT PLAN / CRITERIA</li> </ul>	<ul style="list-style-type: none"> <li>* DESIGN OBSTACLE GROUPS / FIRES BASED ON CDR'S INTENT</li> <li>* ESTABLISH PRIORITY</li> <li>* ALLOCATE RESOURCES</li> <li>* OPERATE TF CL IV / V POINT (TF C3, LIFE SPT)</li> <li>* LINK-UP AUGMENTATION (MANPOWER, HAUL, LIFT)</li> <li>* TRACK/REPORT STATUS</li> </ul>	<ul style="list-style-type: none"> <li>* SITE OBSTACLE GROUPS AND VEH POSITIONS</li> <li>* PROVIDE SECURITY</li> <li>* ASSIST EMPLACING OBSTACLES (FRAT FENCE)</li> <li>* TURNOVER</li> <li>* PROTECT OBSTACLE</li> <li>* LANE CLOSURE</li> <li>* OBSTACLE RECOVERY</li> </ul>	<ul style="list-style-type: none"> <li>* SITE INDIVIDUAL OBSTACLES (MINI REHEARSAL)</li> <li>* EMPLACE MF</li> <li>* MARK MF</li> <li>* RECORD MF</li> <li>* TURNOVER</li> <li>* REPORT STATUS</li> <li>* LANE CLOSURE</li> <li>* OBSTACLE RECOVERY</li> </ul>



# TOP DOWN - BOTTOM UP "A WAY"



- INTENT / AUTHORITY
- MANEUVER TF
- ENGINEER COMPANY
- PRIORITY
- MINES REQUIRED
- PLT HRS REQUIRED



- DF PLAN WITH OBST INTENT (TGT, EFFECT, LOCATION)
- MANEUVER CO(s)
- ENGINEER PLT
- PRIORITY
- MINEFIELD ARRAY
- CONFIRM MINES / HOURS REQ'D

**ANNEX D (ENGINEER)  
SCHEME OF OBSTACLES OVERLAY**



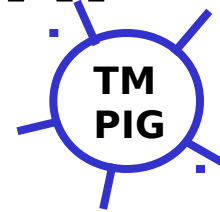
# COMMANDER'S CARD

## "A WAY"



TF \_\_\_\_\_ As of: \_\_\_\_\_

	Executed/Planned	%
CM	<u>17/27</u>	<u>63</u> %
SURV	<u>43 /60</u>	<u>72</u> %



S: 241100 FEB 00

C:

241415 FEB 00

Individual: 16/6/0

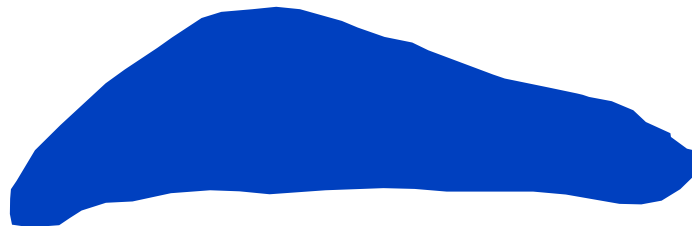
4/5-MD

1/0-AIR VOL (4 hr)

K2A

4/5-MD

K2B



2/0-MD

0/1-VOL (48 hr)

10/10-HORNET K3A



S: 241830 FEB 00

C:

251300 FEB 00

M2

Hull: 14/ 13/0



S: 240900 FEB 00

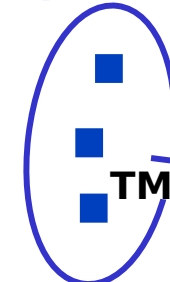
C:

241800 FEB 00

M1

Hull: 12/ 9/0

M2 Hull: 4/5/0



S: 251330 FEB 00

C:

251400 FEB 00

M2

Hull: 14/ 8/4






# COMMANDER'S CARD





TF 1-5 CAV As of: \_\_ May 00


Executed/Planned

CM \_\_/\_\_/\_\_  
SURV \_\_/\_\_/\_\_

**K1B**  \_\_/\_\_/\_\_ - MD  
\_\_/\_\_/\_\_ - AIR VOL (4 hr)

**K1A**  \_\_/\_\_/\_\_ - MF  
\_\_/\_\_/\_\_ - HORNET

**K2A**  \_\_/\_\_/\_\_ - MD  
\_\_/\_\_/\_\_ - MOPMS

**K2B**  \_\_/\_\_/\_\_ - MT  
\_\_/\_\_/\_\_ - VOL (48 hr)

TM A

TM B

TM C

TM D

S:  
C:

M1 Hull: \_\_/\_\_/\_\_  
M2 Hull: \_\_/\_\_/\_\_

S:  
C:

M1 Hull: \_\_/\_\_/\_\_  
M2 Hull: \_\_/\_\_/\_\_

S:  
C:

M1 Hull: \_\_/\_\_/\_\_  
M2 Hull: \_\_/\_\_/\_\_

S:  
C:

M1 Hull: \_\_/\_\_/\_\_  
M2 Hull: \_\_/\_\_/\_\_

68



# COMMANDER'S CARD

TF 1-5 CAV As of: \_\_ May 00

Executed/Planned

CM \_\_/\_\_/\_\_  
SURV \_\_/\_\_/\_\_

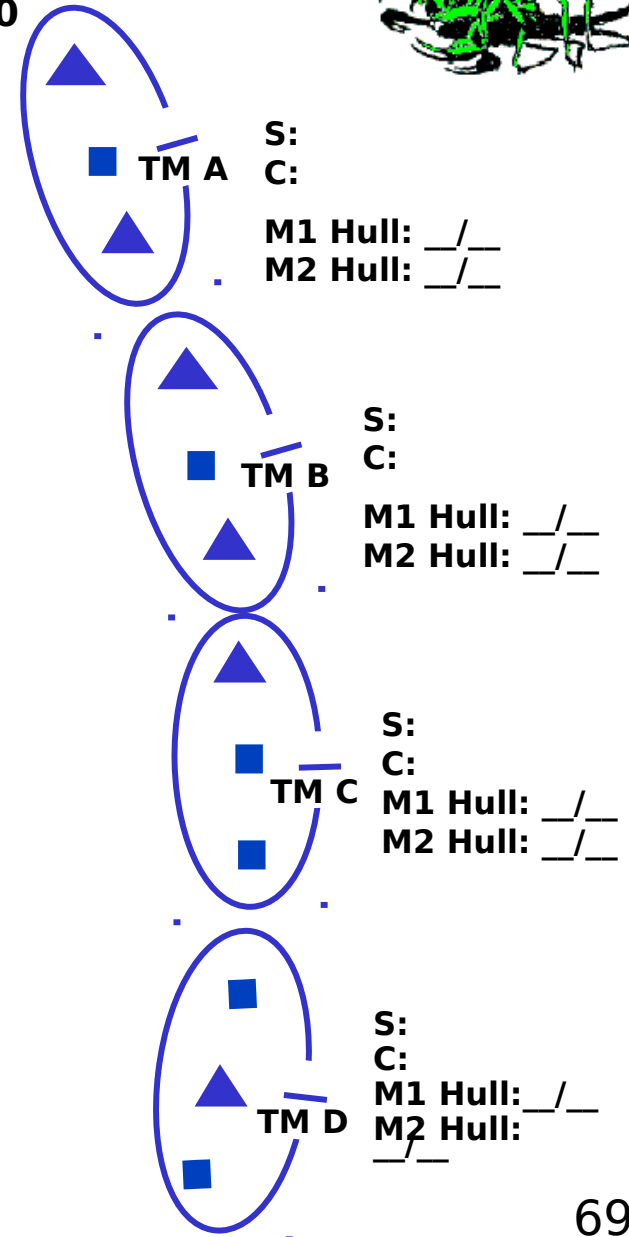


\_\_/\_\_/\_\_ - MD  
\_\_/\_\_/\_\_ - AIR VOL (4 hr)  
K1 A

\_\_/\_\_/\_\_ - MD  
\_\_/\_\_/\_\_ - HORNET  
K1 B

\_\_/\_\_/\_\_ - MF  
\_\_/\_\_/\_\_ - MOPMS  
K2 B

\_\_/\_\_/\_\_ - MT  
\_\_/\_\_/\_\_ - VOL (48 hr)  
K2 A





# DEFENSIVE PREPARATION DECISION POINTS



DP	EVENT	Friendly	Enemy	Action
1	Shift blades from CM to survivability	<ul style="list-style-type: none"> <li>* TM __ vehicle positioned and staked</li> <li>* &gt; 50% ATD complete</li> <li>* NLT 211800 April</li> </ul>	<ul style="list-style-type: none"> <li>No loss of blades</li> <li>To enemy action</li> </ul>	Shift 75% of available blade teams to begin TM__ survivability; Shift remainder > 90% ATD
2	Shift blades from TM__ to TM__	<ul style="list-style-type: none"> <li>* 90% of M1, M2, BSFVN dug in @ 221800 APR</li> <li>* &lt;90% of ME TF dug in @ 221800 January</li> </ul>	<ul style="list-style-type: none"> <li>No loss of blades</li> <li>To enemy action</li> </ul>	Shift blades to TM__ - Change standard from two tier to one tier
3	Shift blades from survivability to counter mobility	90 % of planned survivability positions complete; unable to complete CM plan; Volcano's < 50% FMC	<ul style="list-style-type: none"> <li>Enemy Recon &amp; FD/ RD fight is successful</li> <li>Expect both MRR in 2-Up/2-Back Formation</li> </ul>	Blades shift to 1100m Type-2 Anti-Tank Berm reinforce TM__ @ expected penetration
4	Shift scatterable mine assets	<ul style="list-style-type: none"> <li>* Under CM Glidepath Executed &lt; 70% planned CM effort on AA or EA</li> <li>* Review at 230100 Jan</li> </ul>	<ul style="list-style-type: none"> <li>Enemy Recon &amp; FD/ RD fight is successful</li> <li>Expect 2-Up/2-Back Formation along a specific AA</li> </ul>	Allocate 4-hr volcano or ADAM/RAAMS based on shortfall of effort.



# DEFENSIVE PREPARATION DECISION POINTS



DP	EVENT	FRIENDLY	ENEMY	ACTION
1	CL IV/V PUSH AIR VS GROUND * NLT 042000 DEC	AVAILABILITY / WIND UH60 < 45 KNOTS CH47 < 30 KNOTS UNABLE TO SLINGLOAD		SHIFT CL IV/V HAUL TO TRUCK
2	SHIFT BLADES FROM ME	* 90% OF M1, M2, BSF DUG IN @ 051200 DEC * <90% OF ME TF DUG IN @ 051200 JAN	NO LOSS OF BLADES TO ENEMY ACTION	- SHIFT BLADES TO TM _____ - CHANGE BRIGADE STD FROM MODIFIED TWO TIER TO ONE TIER
3	SHIFT BLADES FROM CM TO SURVIVABILITY	* < 5 BLADE TEAMS FIVE * INABILITY TO SUSTAIN * > 50% ATD COMPLETE * NLT 051200 JAN	NO LOSS OF BLADES TO ENEMY ACTION	- TM _____ POSITIONS SITED
4	SHIFT SCATTERABLE MINE ASSETS	* ON GLIDEPATH TO EXECUTE < 90% CM EFFORT ON AA OR EA * REVIEW AT 051200 JAN		ALLOCATE 4-HR VOLCAN OR ADAM-RAAM BASED ON SHORTFALL OF EFFORT



# OBSTACLE INTENT



*The commander defines the end result that the fires and the obstacles must achieve prior to determining intent*

**TARGET** - Enemy force to be affected by obstacle(s); identify by size, type, echelon, tactical grouping

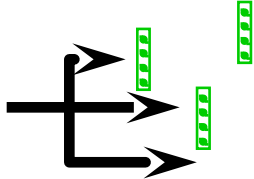
**OBSTACLE EFFECT** - Disrupt, Turn, Fix, Block

*(Provides a common expectation of the effect the commander wants to have on enemy maneuver)*

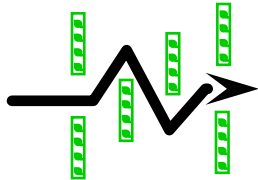
**LOCATION** - Where along AA; relative to maneuver and fire control measures



# FIRES AND OBSTACLE EFFECTS



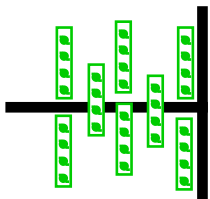
**DISRUPT EFFECT:** Breaks up enemy formation and tempo, interrupts his timetable, causes him to commit breaching assets prematurely, and causes him to piecemeal his attack.



**FIX EFFECT:** Causes the enemy to deploy into their attack formation early, allows the enemy to advance slowly into the engagement area, and makes the enemy fight in multiple directions once he is in the engagement area.



**TURN EFFECT:** Prevents the enemy from bypassing or breaching at the start of the turn, forces the enemy to bypass in the desired direction, and maintains pressure on the enemy throughout the turn and allows exploitation of his flank.



**BLOCK EFFECT:** Prevents the enemy from bypassing or breaching the obstacles, maximizes available



# OBSTACLE BELTS



**Obstacle belts are the graphic control measure the brigade commander uses to control tactical or situational obstacle employment.**

**Obstacle belts , however, still give TF commanders the latitude they need to develop detailed obstacle plans based on direct-fire and situational obstacle planning. The brigade commander's obstacle intent is descriptive rather than prescriptive.**



# OBSTACLE GROUPS



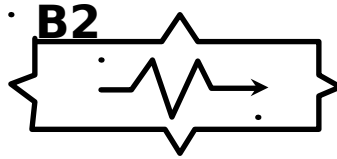
**Obstacle groups are one or more individual obstacles grouped to provide a specific obstacle effect. TFs use obstacle groups to ensure that company teams emplace individual obstacles that support the TF scheme of maneuver**

**Because of the requirement for detailed integration with the fire plan, very few obstacles groups are planned above TF level.**





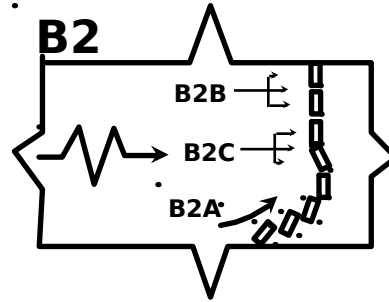
# INTENT: BRIGADE BELTS



- \* BELTS ARE A TOOL TO RESOURCE WITH MATERIAL, MANPOWER, AND TIME.**
- \* ALLOWS ENGINEER TO GET THESE RESOURCES TO THE RIGHT PLACE, IN THE RIGHT AMOUNT AND IN SUFFICIENT TIME.**
- \* BELTS PROVIDE TFs LATITUDE TO DEVELOP A DETAILED OBSTACLE PLAN (DESCRIPTIVE NOT PRESCRIPTIVE)**
- \* BELTS ATTACK REGIMENTS (TARGET), ASSIGN A RELATIVE LOCATION, AND PROVIDE AN OBSTACLE EFFECT.**
- \* BELTS ARE GRAPHIC CONTROL MEASURES TO FOCUS THE SUPPORT OF A TASK FORCE SCHEME OF MANEUVER.**
- \* BELTS CONVEY OBSTACLE EMPLACEMENT AUTHORITY.**



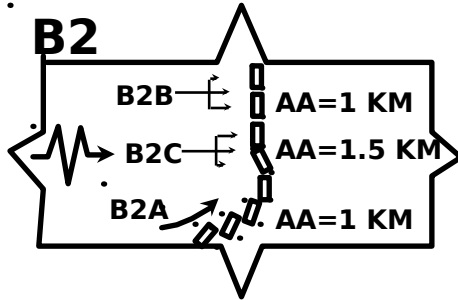
# **INTENT: TASK FORCE GROUPS**



- \* USE ANY CONFIGURATION OF GROUP EFFECTS TO ACHIEVE THE BELT INTENT.**
- \* GROUPS ATTACK MRBs (TARGET) AND ASSIGN A RELATIVE LOCATION FOR ACTUAL OBSTACLES.**
- \* GROUPS IMPOSE STRICT LIMITATIONS ON COMMANDERS TO PRESERVE THE LINK BETWEEN OBSTACLE EFFECTS AND FIRE PLAN.**
- \* GROUPS, RESOURCE FACTORS, AND STANDARD INDIVIDUAL OBSTACLES ARE THE BASIS OF TF OBSTACLE LOGISTICS PLANNING.**



# Requirements vs. Capabilities-Based Resourcing



## REQUIREMENTS-BASED

### B2B

$1.0(AA) \times 0.5 \text{ (RES FACTOR)} = 500$   
LINEAR METERS

500M  $250M / MF = 2 \text{ MF}$

$147 \text{ MINES} / MF \times 2 = 294 \text{ AT}$

### MINES

$4.0 \text{ PLT HRS} / MF = 8.0 \text{ PLT HRS}$

### B2C

3 MFs

441 AT MINES

12.0 PLT HRS

### B2A

3 MFs

1512 AT MINES

24.0 PLT HRS

## CAPABILITIES-BASED

### BRIGADE RESOURCES

14 FIX MFs

2058 AT MINES

36 PLT HRS

### TF RESOURCES

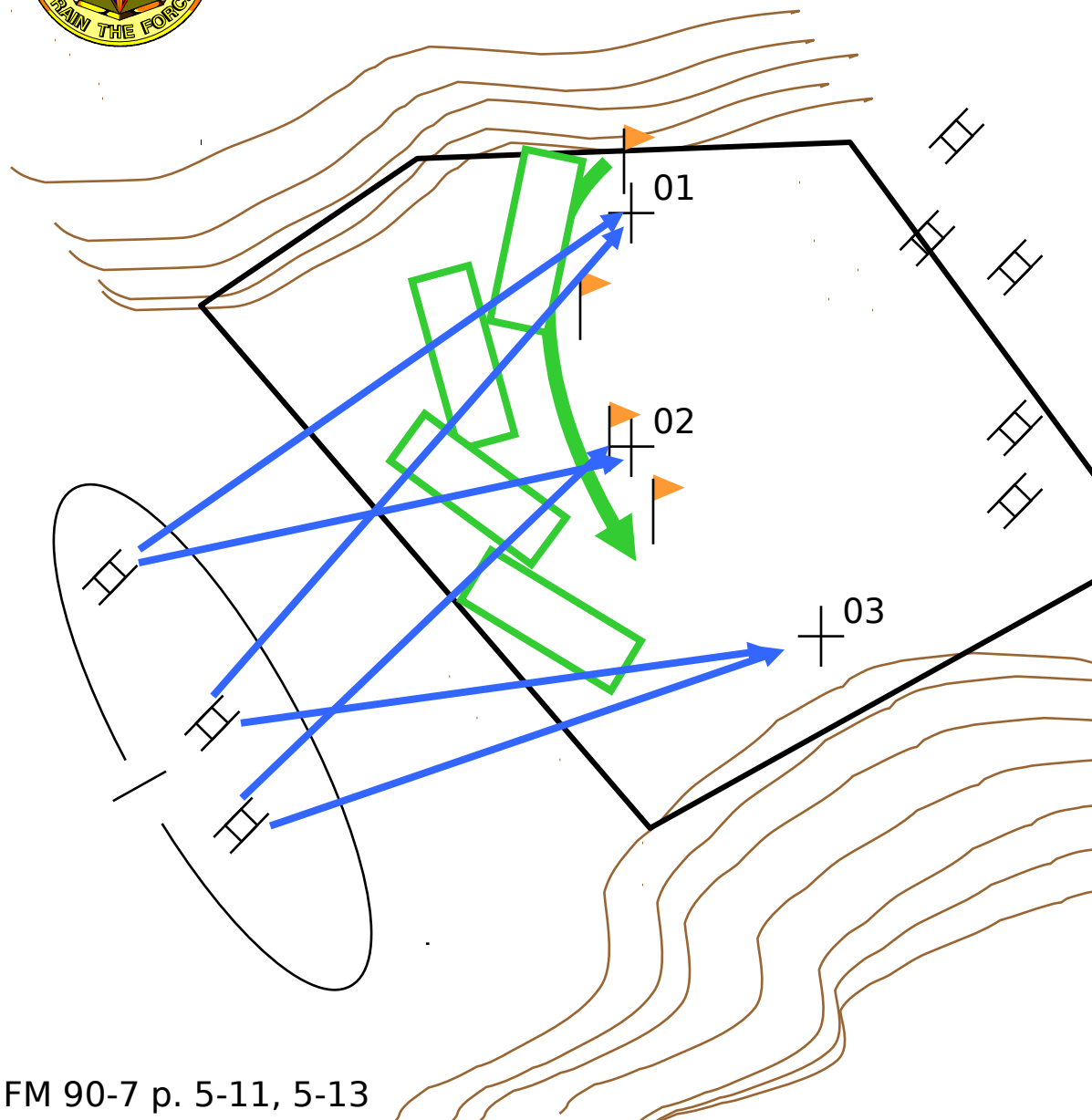
8 MFs

2247 AT MINES

44 PLT HRS



# SITING THE OBSTACLE GROUP



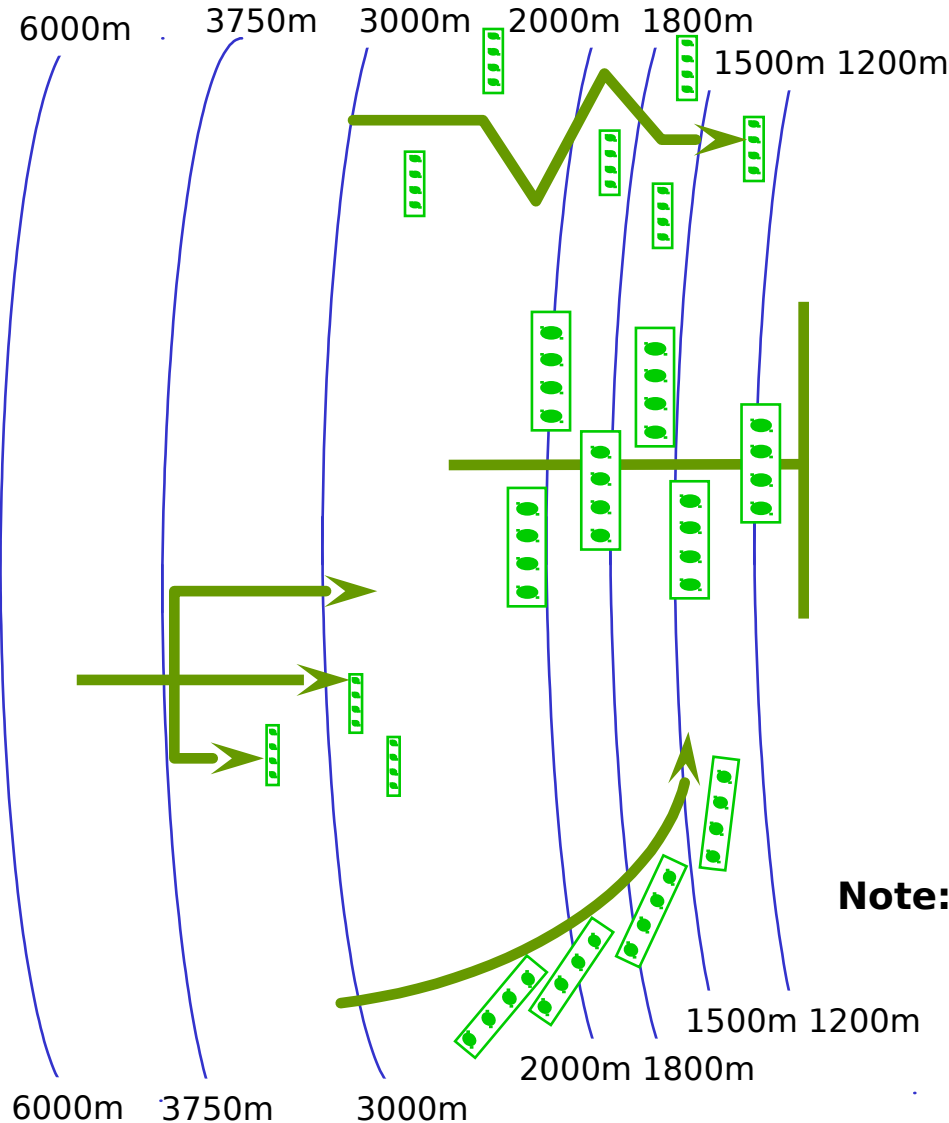
1. CO/TM Cdr decides where he plans to mass fires and marks the necessary fire control measures on the
2. The Cdr identifies tentative locations for his key weapons.
3. The Cdr and Engr agree on the intent.
4. Vehicles simulate the enemy force moving into the EA deploying in a formation similar to what is templated.
5. Markers are placed at the trace of the obstacle effect.
6. Cdr and Engr ensure Obstacles are integrated with fires. Each participant verifies what is covered, notes fire control measures, deadspace, and updates range cards.



# INTEGRATION OF FIRES AND OBSTACLE EFFECT



500m  
300m  
to  
800m  
MRB



**Note: All four groups shown only for comparison. Normally, CO-TM covers one or two obstacle groups.**



# REQUIREMENTS-BASED OBSTACLE RESOURCING



## RESOURCE CALCULATION:

$$\frac{(\text{TTL WIDTH OF AA}) \times (\text{RESOURCE FACTOR})}{\# \text{ STANDARD}} =$$

**MINEFIELDS  
FRONTAGE)**

**STANDARD MINEFIELDS**

**BLOCK**

**TURN**

**FIX**

**DISRUPT**

**PLT HRS:** 5.0 HRS

3.5 HRS

1.5 HRS

1.0 HRS

**MINES:** 546 AT

504 AT

147 AT

126 AT

**RF:** 2.4

1.2

1.0

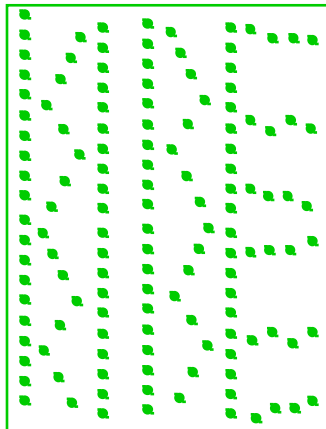
0.5

**FRONT:** 500m

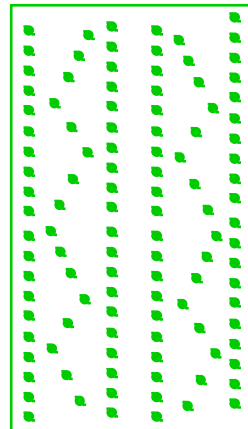
500m

250m

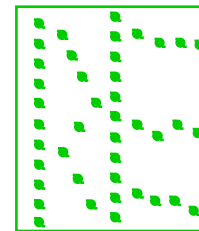
250m



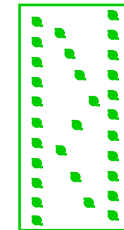
320m



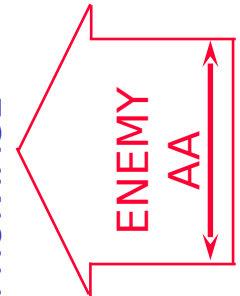
300m



120m



100m



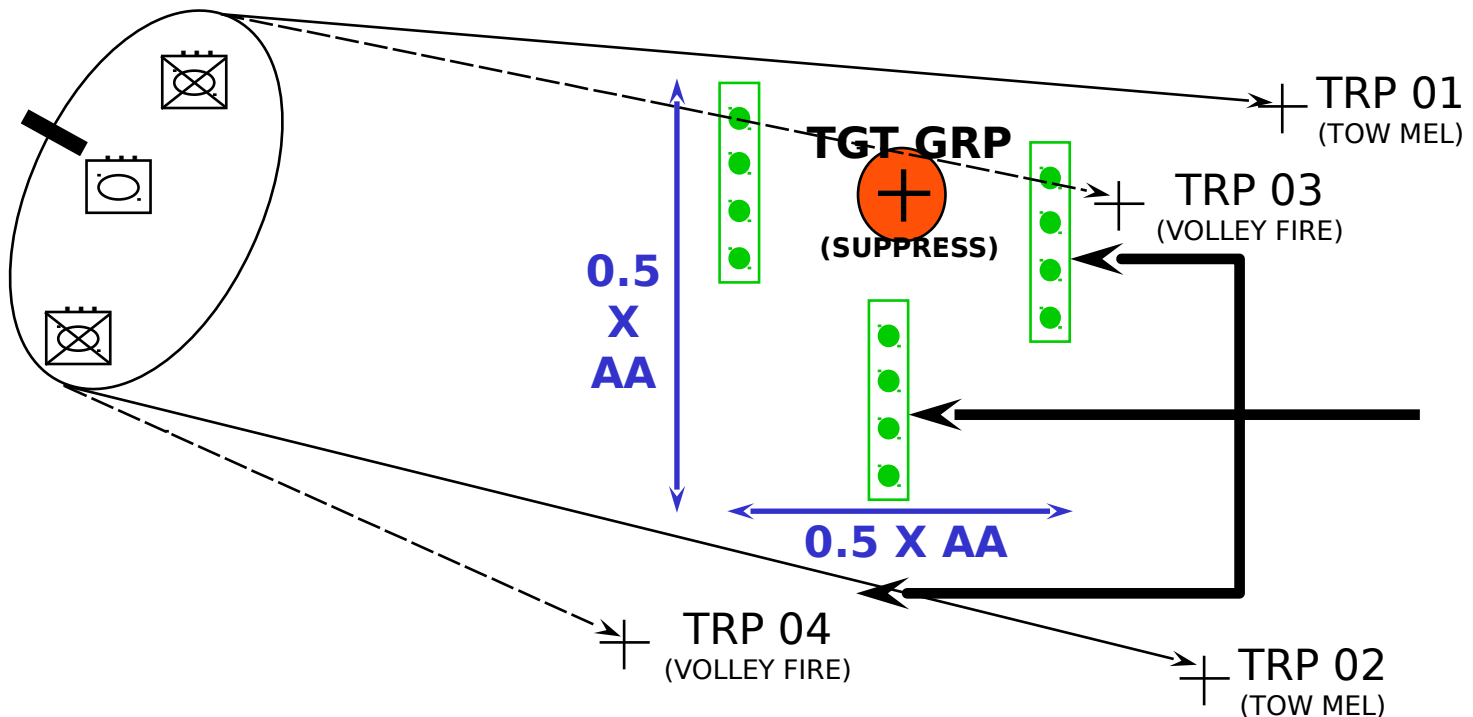


RF = .5  
SF = 250m

# DISRUPT GROUP



- BREAKS UP ENEMY FORMATION AND TEMPO.
- FORCES ENEMY TO DEPLOY AND BREACH EARLY.
- SLOWS PART OF ENEMY FORMATION AND FRAGMENTS C3.
- ALLOWS PART OF ENEMY TO BYPASS PIECEMEAL INTO MAIN ENGAGEMENT AREA.
- SHALLOW OBSTACLES NOT VISIBLE AT LONG RANGE BUT SHOULD BE EASILY BYPASSED AS ENEMY NEARS.





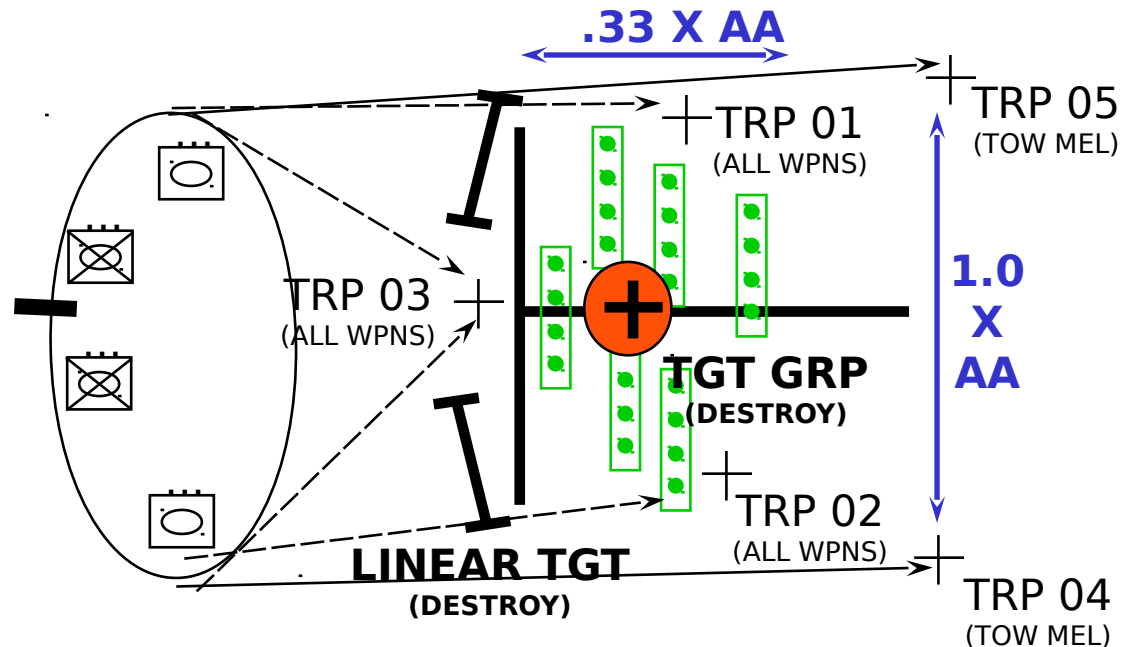
# BLOCK GROUP



RF = 2.4

SF = 500m

- MASSES FIRES / OBSTACLES TO STOP ENEMY ATTACK ALONG SPECIFIC AA OR TO PREVENT ENEMY FROM PASSING THRU AN EA.
- NO BYPASS AVAILABLE; THE EA MUST COVER THE ENTIRE AA.
- HIGH VOLUME OF INTERLOCKING FIRES ACROSS THE ENTIRE AA.
- BLOCK OBSTACLES MUST DEFEAT ENEMY BREACHING EFFORT.
- GROUP CONSISTS OF COMPLEX OBSTACLES WHICH REQUIRE MULTIPLE BREACHING TECHNIQUES TO REDUCE A LANE.
- INCORPORATES BOTH "VISIBLE" AND "UNSEEN" OBSTACLES TO DISCOURAGE BREACHING.
- **BLOCK OBSTACLES DO NOT STOP AN ENEMY ATTACK BY THEMSELVES; THEY MUST BE INTEGRATED WITH INTENSE FIRES.**









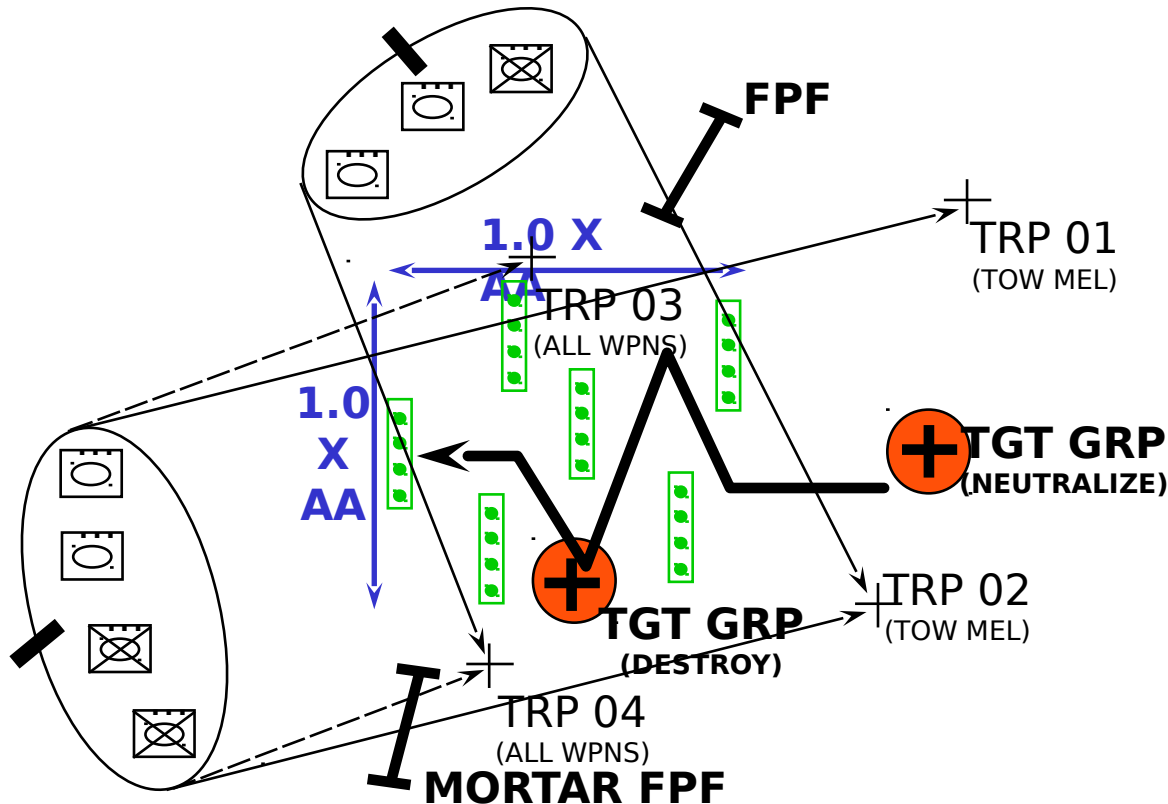
# FIX GROUP



RF = 1.0

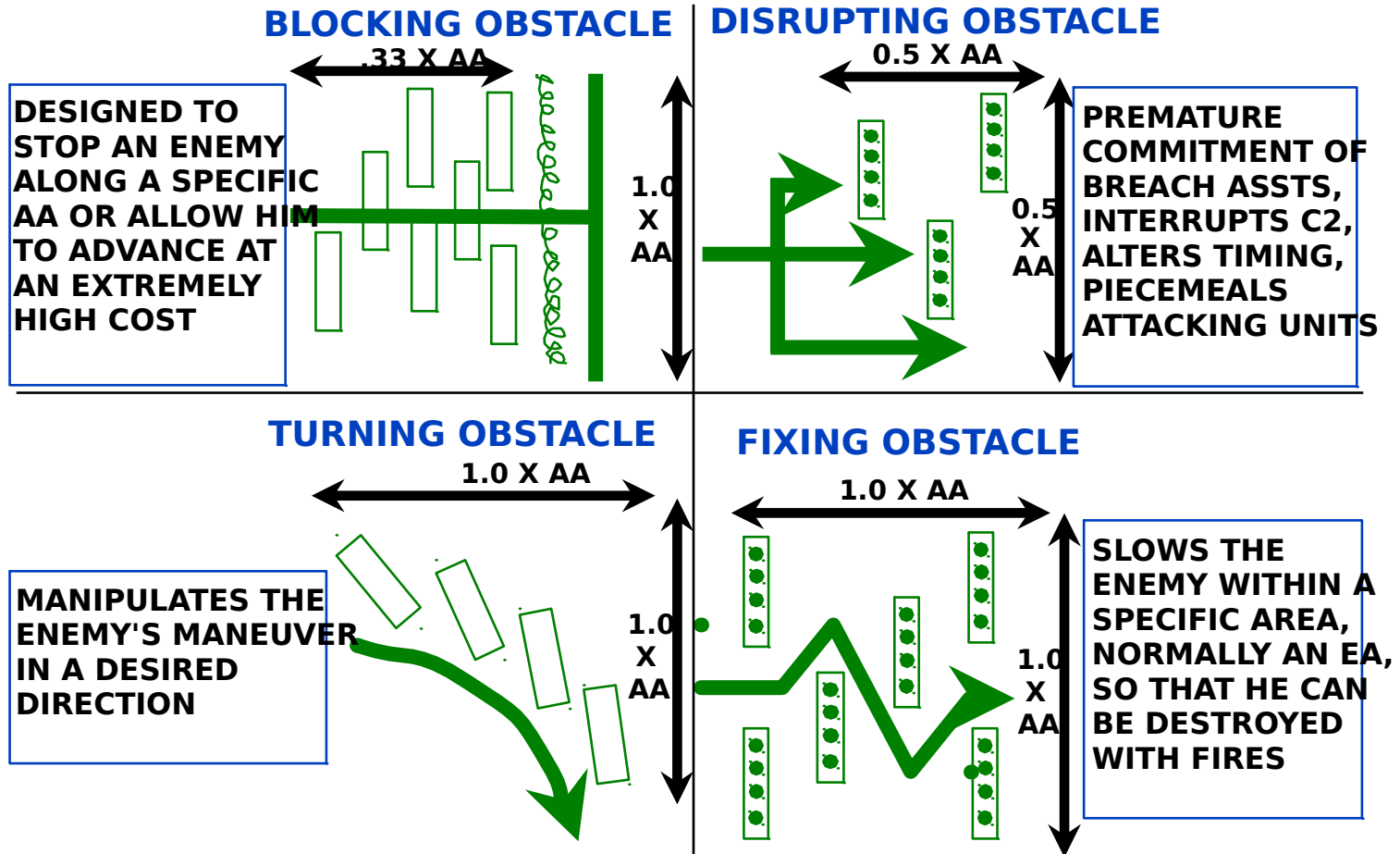
SF = 250m

- SLOWS ENEMY IN AN EA SO DEFENDER HAS TIME TO ACQUIRE, TARGET AND DESTROY ENEMY IN DETAIL.
- INTENSITY OF FIRES AND OBSTACLE DENSITY VARIES AS ENEMY ADVANCES THRU THE DEPTH OF THE ENGAGEMENT AREA.
- INTERLOCKING FIRES FORCES ENEMY TO FIGHT IN MANY DIRECTIONS AT ONCE.
- SHALLOW OBSTACLES ARE ARRAYED IN DEPTH TO CAUSE ENEMY FORMATION TO REACT AND BREACH REPEATEDLY.
- INDIVIDUAL OBSTACLES APPEAR TO BE EASILY BREACHED/BYPASSED.





# Minefield Effects





# Situational Obstacles



# SITUATIONAL OBSTACLE



## EMPLOYMENT PRINCIPLES

### \* IDENTIFY THE NEED.

- Attack an enemy vulnerability
- Exploit Success
- Separate follow-on enemy forces
- Flank protection

### \* PLAN FOR RESOURCES.

### \* INTEGRATE WITH FRIENDLY FIRES.

### \* PLAN THE OBSTACLE(S).

- Commanders and staffs identify situational obstacles during the planning process in order to integrate with fires and ensure time is available to commit the delivery asset.

### \* IDENTIFY EXECUTION TRIGGERS.

- Friendly triggers (i.e. Reserve committed)
- Enemy triggers (i.e. Repositioning to flank)
- Combination of Friendly and Enemy triggers

### \* WITHHOLD EXECUTION OF THE OBSTACLE UNTIL IT IS NEEDED.



# SITUATIONAL OBSTACLES



**“Without fires, the obstacle may interfere with the enemy, but he can breach the obstacle at will.”**

FM 90-7 p. 7-2



# SITUATIONAL OBSTACLE EMPLOYMENT



## DEFENSE

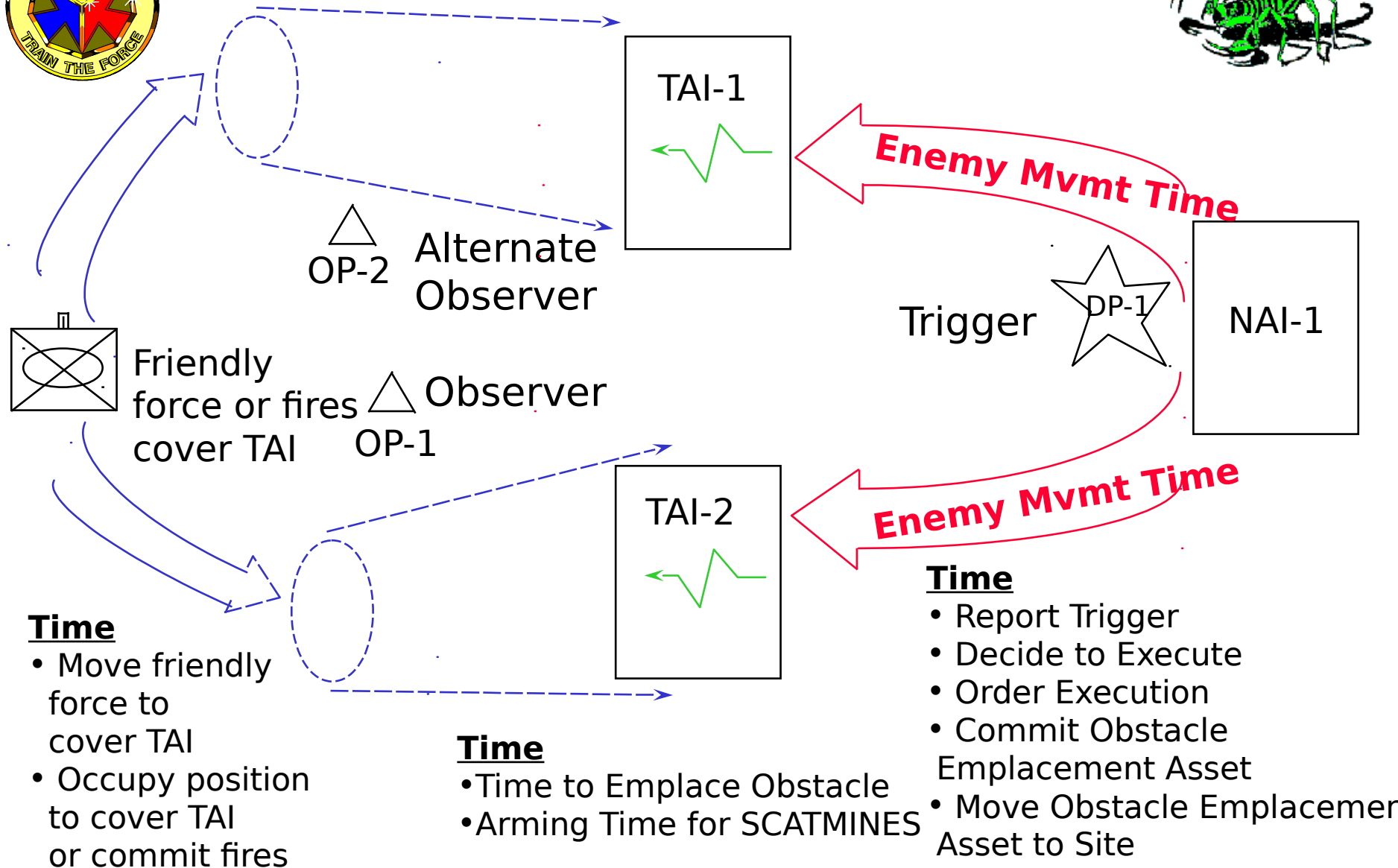
- SHAPE THE BATTLESPACE FOR THE DEEP BATTLE
- SEPARATE ATTACKING ENEMY ECHELONS
- REINFORCE OR REPAIR TACTICAL OBSTACLES ALREADY EMPLACED
- REINFORCE EXISTING OBSTACLES ON ENEMY AVE OF APPROACH
- DEFEAT PENETRATIONS
- EMPLACE ADDITIONAL OBSTACLES BASED ON PRODUCTION

## OFFENSE

- INTERDICT COMMITMENT OF ENEMY RESERVES (CAS / JAAT)
- ASSIST GROUND FORCES (FOLLOW AND SUPPORT) IN DEFEATING ENEMY CATK'S THREATENING FLANKS OR PENETRATIONS
- OBSTRUCT ENEMY WITHDRAWAL OR ESCAPE ROUTE DURING AN ENVELOPMENT
- ISOLATE ADJACENT FORCES FROM INFLUENCING OR REINFORCING THE MAIN EFFORT
- TRANSITION TO A HASTY DEFENSE TO ALLOW FORCES TO REBUILD COMBAT<sup>90</sup>



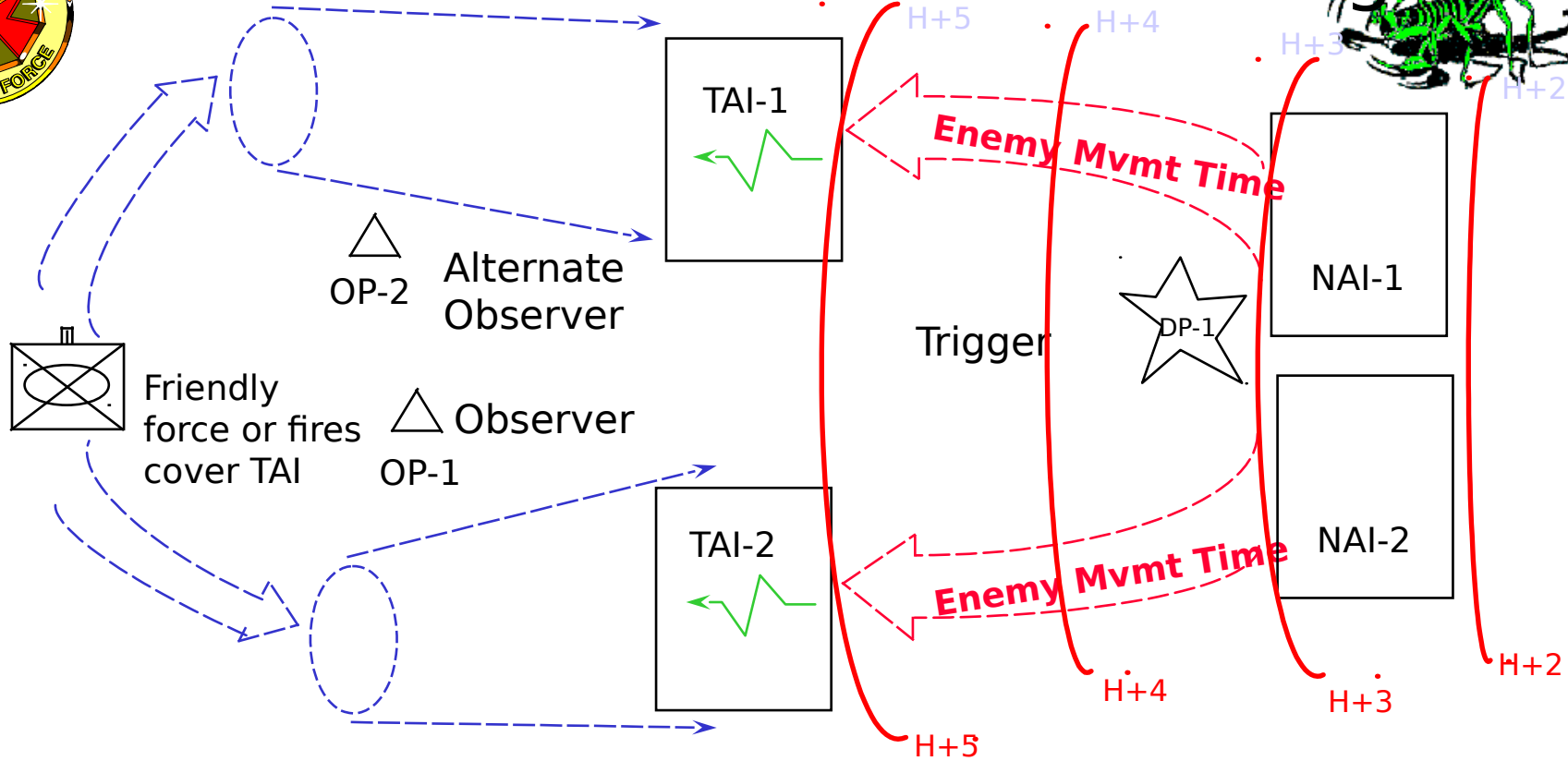
# SITUATIONAL OBSTACLE PLANNING







# Situational Obstacle Planning



**NAI => NAMED AREA OF INTEREST:** A POINT OR AREA ALONG A PARTICULAR AVE OF APPROACH THRU W ENEMY ACTIVITY IS EXPECTED TO OCCUR. ACTIVITY OR LACK OF ACTIVITY WITHIN AN NAI WILL HELP CO OR DENY A PARTICULAR ENEMY COA.

**TAI => TARGETED AREA OF INTEREST:** A **LOCATION** WHERE FRIENDLY FORCES CAN INFLUENCE THE ENEMY

**DP => INVOLVES A **DECISION OR AN EVENT/ACTION** THAT MAY OR MAY NOT TAKE PLACE, BASED ON FRIENDLY AND ENEMY CRITERIA**

**TRIGGER => INVOLVES AN **ACTION OR EVENT** THAT WILL HAPPEN, IT IS ONLY A MATTER OF TIME. IT CAN BE AN **ENEMY OR FRIENDLY EVENT**. THERE IS NO DECISION RELATED TO YES OR NO, ONLY WHEN**



# Applying Targeting Methodology to Situational Obstacle Planning



1. **FOCUS OF OBSTACLES.** Determine **WHAT** you want obstacles and fires to the enemy. Describes the effects needed to influence the enemy's maneuver.
2. **IDENTIFY THE TARGET.** Specify **WHO** you want obstacles and fires to effect.
3. **TARGETED AREAS OF INTEREST. WHEN? / WHERE?**
4. **INTEGRATE OBSTACLES AND FIRES** with the scheme of maneuver. (Task, Purpose, Method, Endstate).
5. **TIME/DISTANCE ANALYSIS.**
6. **OBSERVER / TRIGGER PLAN.** Position observers to link NAIs and decision points with triggers.
7. **SKETCH: VISUALIZE THE SCHEME OF OBSTACLES.**
8. **ESTABLISH OWNERSHIP.**
9. **REFINE.** Apply targeting methodology to refine plan at the TARGETING MEETING.
10. **DISSEMINATE AND REHEARSE.** Disseminate the refined plan across the combined arms rehearsal to reduce risk of minefield fratricide. Include decision points, triggers, and overwatch at the the combined arms rehearsal.